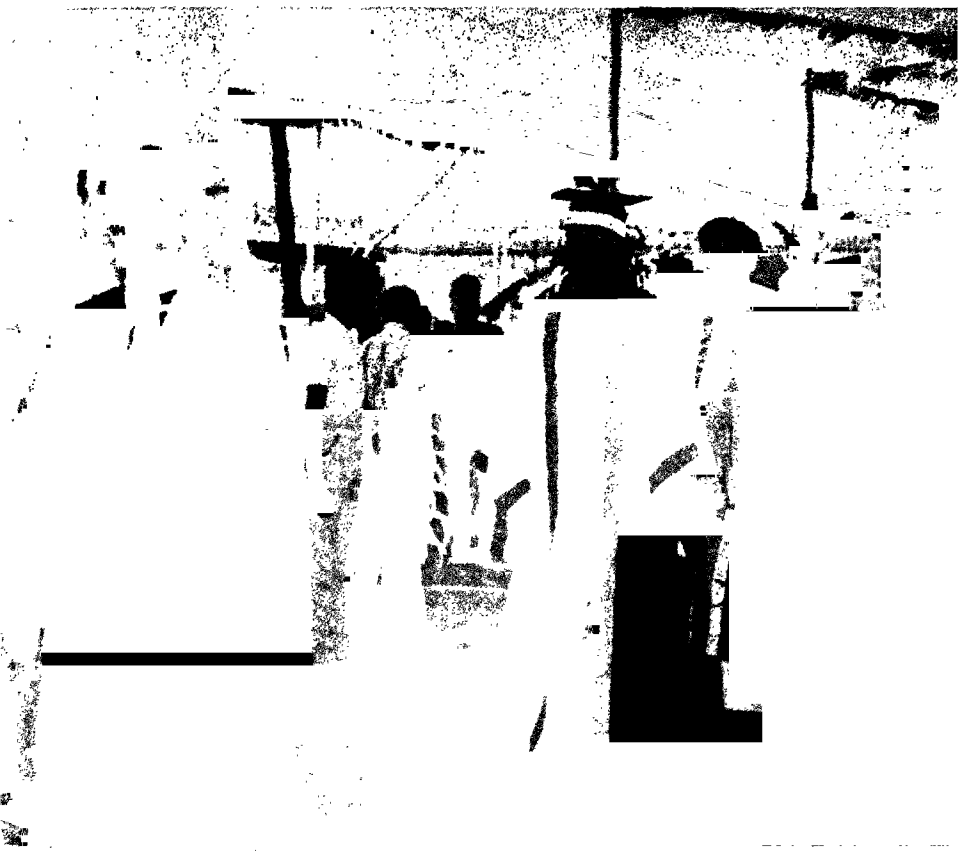
University News

MONDAY, MARCH 14, 1988 Rs. 1.50



Academic procession at the convocation of the Bharathidasan University

International Institute for Population Sciences

(DEEMED UNIVERSITY)

Govandi Station Road, Deonar.

BOMBAY-400088

ADMISSION NOTICE

Applications are invited, in prescribed form for admission to the following courses of this Institute :

1. M.Phil in Population Studies: No. of Seats : Ten (without fellowship)
2. Ph.D. in Population Studies: No. of Seats : One (with fellowship)

Eligibility Requirements

For M.Phil : The candidate should have good Master's degree in any of the subjects: viz., Economics, Demography, Statistics, Mathematics, Sociology, Social Anthropology, Psychology and Geography of a recognised University with minimum of 50% marks.

OR

A good Master's degree with minimum of 50% marks in any other subjects with atleast 5 years experience in the field of population.

Those who are likely to appear for M.A./M.Sc. or have appeared and results awaited, may also apply.

Lectures working in Universities/Colleges may also apply through proper channel.

Past students of the Institute who have successfully completed Certificate/Diploma in Population Studies are also eligible for admission as a special case provided they satisfy the conditions as laid down in "Eligibility Requirement". Such students will be required to complete only : Area Study, Field Study (if they have not submitted the same in CPS DPS Course) and a Dissertation, within a period of six months from admission.

For Ph.D. : The candidates should have an M.Phil Degree in Population Studies of the Institute or its equivalent from recognised University with a minimum of 50% marks or its equivalent grade.

OR

Should have a good academic record with first or high second class Master's degree in Statistics, Mathematics, Sociology, Economics, Anthropology, Psychology or Geography, with a Certificate or Diploma in Population Studies of the Institute or its equivalent. Such candidate, if selected, will have to complete M.Phil in the first instance.

The request for the application form and other particulars should be addressed to Assistant Registrar (Academic) alongwith a self addressed envelope of 25 x 12 cms size and Rs. 3.00 stamp duly affixed thereon.

The envelope should be superscribed as "APPLICATION FOR M.PHIL/Ph.D. COURSE". Applications duly completed in all respects should reach the Assistant Registrar (Academic) on or before 29th April, 1988.

K. Srinivasan
DIRECTOR

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IN THIS ISSUE

Editor:
SUTINDER SINGH

Structuring Basic University Functions

—An Alternate Model

A. K. Shah*

A university is a deliberately-created, special purpose organizational system operating in the knowledge industry. The performance of varied professional and non-professional activities, some basic or primary and others auxiliary or subsidiary in terms of its goals is, therefore, a basic requirement for the effectiveness[1] of this system. Furthermore, because of their very diversity, these activities can best be performed on the basis of specialisation and division of labour, the individual activities additionally requiring systematic and rational coordination and integration so as to constitute one continuous stream of goal—oriented university effort. This necessitates, among other things, the creation of an administrative overlay -the university administrative system—an integral part of whose job is to ensure proper structuring of university activities. This paper attempts an exercise in identifying and analysing the present commonly-adopted pattern of structuring basic university activities (i.e. excluding the auxiliary ones) in the Indian context, so as to highlight its glaring dysfunctionalities, and in suggesting an alternate model for this purpose

The structuring of organizational activities refers to the process of determining the internal arrangement for their performance in terms of what activities are assigned to which positions and what are the interrelationships between these activities or, what amounts to the same thing, between the positions or the incumbents thereof to whom they are assigned This internal patterning has very important implications for organizational functioning, as, besides providing a visible shape to the abstract system, it is a major determinant of what activities an organization could undertake and also, how efficiently would it be able to perform them Thus, by acting as a facilitating or obstructing agent it significantly influences the effectiveness and efficiency of the total system. In any human group this structure is bound to arise over time, as a result of social processes operating therein. It will not, however, be necessarily group-goal-oriented, and where it happens to be so, the structural pattern may militate against group-goal-achievement Hence, in deliberately-contrived, purposive organizations, such as a university, the emergence of a 'suitable' structure cannot be left to the mercy of chance forces, but has to be ensured through deliberate managerial action-referred to as the organising element of the management function. This suitability criterion requires that the resultant work system should : (1) provide for the performance of all necessary activities, (2) guard against performance of unnecessary activities as also against unnecessary duplication of activities, and (3) ensure performance of the necessary activities in an efficient and coordinated manner. The organising process—involving activities identification, activities grouping and activity-authority delegation—attempts to take care of these through a thorough activities analysis directed at detailed enumeration of necessary activities in terms of organizational goals, and decisions and relations analyses concerned with determining the authority-responsibility package of different sub-systems and positions and the resultant interrelationships.

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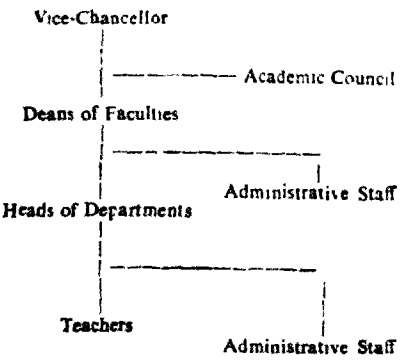
Identification of the university goal, in terms of the foregoing conceptual framework, then, is the logical starting point for any study or prescription regarding the structuring of university activities From time to time, this goal has been variously defined in highly generalised and philosophical terms to include a configuration of goals, and may, as such, be conceptualised as a goal-system made up of various inter-linked sub-goals. While the latter ones cannot be exclusively defined for all times to come, dependent as they are on contemporary thinking, social values and expectations, in the context of the present milieu, they may be identified as : (1) Knowledge-dissemination, (2) Knowledge-production, and (3) Knowledge-application for problem-solving. All these three components of the university goal-system are not only equally important, they are so inextricably intermeshed that inadequate attention to any one of them is bound to have adverse impact on the attainment of the others. They, however, need separate consideration for spelling out the specific basic activities required to subserve them and also for understanding their interrelatedness

The dissemination objective is primarily concerned with making known to one category of university clientele, the knowledge-seekers, what is already known, i e. the existing fund of knowledge in different disciplines—it being no less important to draw attention to what is not known (the dark or blind areas) and what is only imperfectly known. The fulfilment of this objective is attempted through undertaking of various instructional programmes, viz regular full- and part-time courses of study, adhoc short-period encapsulated training and development programmes and lecture series, in different academic disciplines. Publication of books, articles, monographs etc, containing digest of the available knowledge also contributes to the achievement of this end. While the generation of new ideas and identification of research areas in the course of knowledge-dissemination-activities link this objective to the second one, the use of this knowledge in problem-solving relates it to the third objective. The knowledge-production objective, on the other hand, involves research effort, the undertaking of basic and applied, conceptual and emperical, externally sponsored and non-sponsored researches, and also guidance and supervision of research effort of others, directed at reducing the quantum of the unknown, as also improving the quality and reliability of the known. Publication of results and their use in teaching and problem solving interlink this objective with the other two. The knowledge-application objective, in turn, involves the use of the already-available as also newly-generated knowledge for problem solving. This is primarily an assisting or service function involving provision of consultancy or advisory facilities to such clientele as business and industry, governments, social institutions, etc. The knowledge acquired or developed in the course of providing these services and its use in teaching and research again link this objective and its related activities to the other two. The foregoing theoretical framework concerning fragmentation of university-goal, identification of basic goal-related activities and interrelatedness of goals and activities may be diagrammatized as (on next page)' Th personnel directly involved in performing all the above university-goal-directed basic activities are the knowledge-workers, the teachers and researchers in the university system, and one of the variables importantly determining the effectiveness and efficiency with which they perform them is the way these basic activities are structured.

The commonly-adopted pattern for basic activities structuring in the Indian universities is one in which the performance and administration of all the forementioned three activities—aiz teaching, research and consultancy—related to a specific academic discipline are integrated and coordinated within a specific department named after the concerned discipline, the Head of the Department being charged with the responsibility for overseeing their integrated performance ' These Departments, thus, constitute the basic academic-cum-administrative university units They are, thereafter, bunched into Faculties primarily on the basis of allied nature of concerned disciplines, which are again administrative-cum-academic units, the Deans of the Faculties being assigned the function of supervising and coordinating the working of the Departments falling within their jurisdiction The overall integration of all the basic university functions, at the university level, is, finally done by the Vice-Chancellor and the Academic Council Diagrammatically, this arrangement is

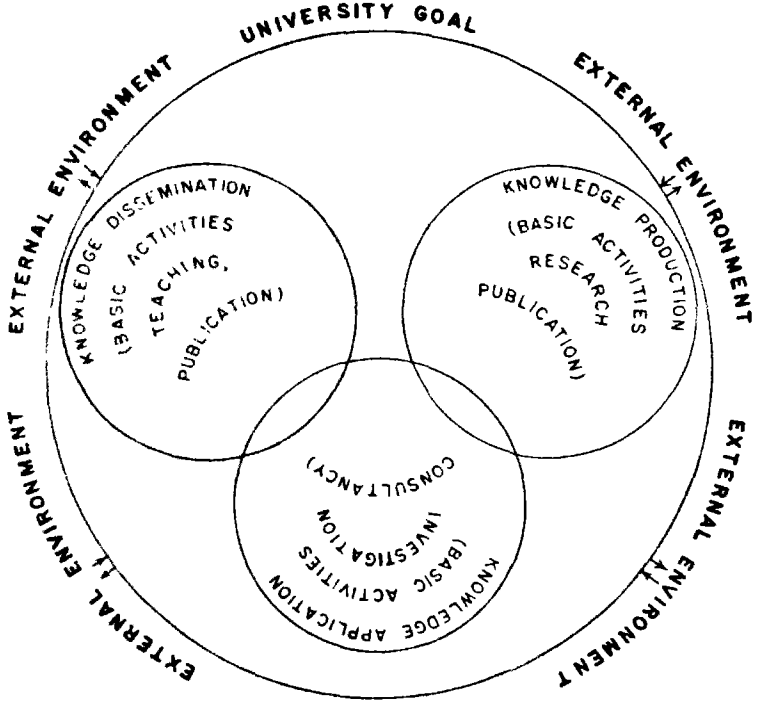


Notes : A. Identification and discussion of committees constituted at different levels is left out of the discussion as the pattern in their case shows wide variations. Nor is their discussion considered germane to the subject-matter of discussion.

B. This is a discussion of the basic common structure only. In reality, the structural arrangements are considerably complicated by the superimposition of Institutes, Centres, Colleges, etc., oftentimes with vague, imprecise and over-lapping authority, responsibility and jurisdiction.[5]

A critical evaluation of the existing structural arrangement, as outlined above, reveals that, in addition to various extra pathological consequences emanating from the superimposition of subsystems like Institutes, colleges etc., over this basic structure (Note B below the diagram)—the vague and inadequate definition of authority and jurisdiction of Deans, Directors, Principals etc., causing almost continuous interpersonnel jurisdictional, functional and personality clashes and squabbles—it suffers from certain fundamental operational limitations that are inherent in the set up itself. These deficiencies, quite evident even today are expected to become even more glaring *in times to come; and therefore, call for urgent* administrative action before they bring about a total breakdown in the overall university system.

The creation of sub-systems hierarchy through the managerial process of activity-grouping or departmentation is an inescapable necessity for any organizational system that outgrows a personnel strength dictated by the Span of Management of a single person;[6] more so in the case of universities which encompass a large number of varied disciplines within their ambit. While highlighting this general reality, however, Management and Organization theoreticians and practitioners have failed to evolve any specific guidelines for such consequent decisions as; when to departmentate, on what bases, in respect of which

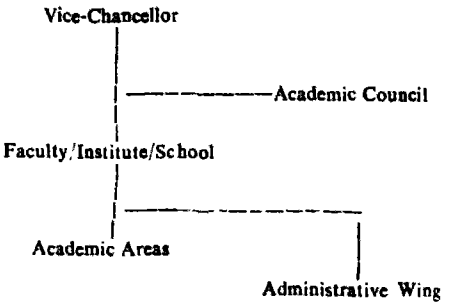


The University Goal System

activities, till what stage or level, etc.; and in the absence of these, the risks of unnecessary proliferation in the number of basic units—factors and possibilities such as personal-ambition-fulfilment, status-cum-maturity association of separate identity, greater autonomy, increased direct attention and recognition from the boss, appreciation of special needs etc., exerting strong pressures for continual fragmentation of higher level sub-systems much beyond the limits dictated by organizational requirements—leading to consequent evils, such as higher costs of administration, promotion of myopic vision, creation of narrow vested interests, tendency towards close control and supervision, etc., that increase the magnitude and complexity of inter-unit coordination while at the same time making it more urgent and important for the effective and efficient functioning of the superordinate system, become too real and large in magnitude to be ignored. The absence of any systematic perspective thinking in this regard and the consequent adhocism that characterises the ongoing process of structure formulation further accentuate this danger.

This is not just a phobia but a hard reality that is universal and that cuts across organizational and environmental differentiations; and in the case of the university system, even a cursory look at the long, variegated list of departments would point out the extent to which this evil phenomenon has permeated through Indian universities.[7] Such a state of affairs not only leads to the breeding of ills highlighted above, it also represents, as is brought out later, the existence of a condition that is exactly the opposite of what is required in terms of contemporary, and also probably furturistic, academic philosophy and viewpoint.

The structural arrangement regarding basic university functions obtaining in the Indian universities, therefore, not only calls for rationalisation and here-and-there tinkering, it requires a complete supplanting by an alternate system geared to the present and future needs. In the case of the existing universities, this has to be a two-phase process, starting with the streamlining activity of merging two or more departments concerned with the same or allied aspects of a broad academic discipline, closely followed by such a rational grouping of these streamlined departments under Faculties/Institutes/Schools, howsoever designated that the Departments are altogether abolished and all the basic university functions in respect of a group of closely-allied disciplines get performed under one administratively-viable unit. Academic-area committees, consisting of teachers belonging to specific disciplines may thereafter be set up within the Faculties/Institutes/Schools to take care of such academic aspects as course designing, syllabi prescribing, teaching work assignment, research coordination etc. The administrative function, on the other hand, would be centralised in a separate administrative wing catering to the administrative and common service requirements of the bunched academic disciplines. This revised set up would, accordingly, have the following shape :



The major resultant benefits of the revised set up may now be identified as :

1. Better utilisation of the available administrative personnel and other facilities, resulting in more efficiency at reduced costs. The proliferation tendency in respect of departments has resulted, in numerous cases, in creation of sub-optimal units making only a partial use of the existing facilities and yet clamouring for further additions to these on various non or in adequately-verifiable grounds. Centralisation of administrative work at the Faculty/Institute/School level would avoid unnecessary duplication and also ensure fuller utilisation of these facilities.

2. Releasing a sizable number of academic functionaries from administrative work, enabling them to devote more time, attention and energy to their primary function of teaching, research and consultancy. The Area chairmen would be concerned with academic matters only and hence, would be able to give them their undivided attention. The performance of the basic university functions is, thereby, likely to improve in all its dimensions.

3. Reduced problem of inter-unit coordination. Though still existing at the Faculty/Institute/School level, this problem would now have an entirely/different complexion in terms of magnitude, frequency and complexity. It is an incontrovertible fact of organizational life that integration of elements, to the extent it is possible, is more effective and efficient than their coordination. Its translation into structure-designing means that the number of ultimate groupings should be kept to the irreducible minimum;

and the possibilities of this are much greater under the new model. Further, inter-unit coordination, through committees with multi-unit representation will be easier and more efficient because of the much reduced need for the same as also because of the reduced number of units whose activities need being coordinated.

4. Reduced scope for close control and supervision of the knowledge-workers performing the basic functions. The work of a teacher and a researcher, by its very nature, cannot be, neither should it be, closely supervised and controlled. The wide span at the Faculty/Institute/School level would be an effective check against any such tendency on the part of its head, irrespective of his personality inclinations. This would be more conducive to innovation in teaching and research and would also serve as a morale-booster.

5. Greater scope for administrative decentralisation. With the creation of administratively-viable units, the possibilities of decentralising university functioning, by delegating authority and responsibility in respect of many administrative matters to Faculty/Institute/School level would be increased. Overall control over them would, at the same time, be relatively easy, because of the small number of locations at which it is to be exercised.

6 Compatibility with contemporary and future academic philosophy and orientation. An overview of the developments in these in the context of three sciences, physics, economics and sociology, reveals that they have undergone a complete cyclical change in the 'macro-micro-macro' sequence. Thus, the realisation of the vastly increased opportunities for in-depth analysis of the more limited and also more manageable focus of attention afforded by microscopic dissection—referred to as elementarism—resulted in the time-honoured macro approach giving way to the micro one, paving the way for the branching out of specialised disciplines. The subsequent realisation that this successive atomisation of knowledge—the separatest fervour and feeling getting accentuated by the adoption of highly-differentiated specialised terminology for academic idea-sharing—led to erection of artificial barriers preventing the development of a holistic viewpoint and adoption of the systems approach that become essential because of the synergy effect—emphasising that the whole is not a sum but a configuration of its parts and cannot, therefore, be understood merely in terms of knowledge about the parts—brought the emphasis back once again to the macro level with consequent stress on the inter-disciplinary (not merely multidisciplinary) nature of teaching, research and consultancy activities. The evolution of a number of integrated interdisciplinary disciplines, such as Behavioural Science, Management, Social Psychology, Biotechnology etc. evidences this changed philosophy and orientation and, in all likelihood, the movement in this direction would gather added momentum in the future. If the Indian university system has not been able to assimilate these changes except to a very limited extent—in spite of frequent repetitive pontifical pronouncements welcoming them and emphasising their necessity and inevitability—the unsuitability of its structural design, with its continued emphasis on narrow discipline-wise specialisation, has been an important contributory factor. In fact, the academic scena-

in Indian universities, oftentimes, albeit to varying extent, resembles an assortment of nearautonomous, almost fully self-contained and self-sufficient, relatively isolated academic islands-each one's domains being jealously guarded by its adherents against, what are considered as, unwarranted encroachments from others—with very little meaningful exchange across the boundaries. The revised model would, by facilitating, in fact necessitating, frequent interactions amongst academics owing allegiance to different though related disciplines, provide the required framework conducive to the development of a university climate promoting wider, more encompassing vision; and this is bound to promote interdisciplinary teaching, research and cosultancy.

The actual implementation of this alternate model—inspite of its superiority and greater suitability, as outlined earlier, would in all likelihood, face a lot of opposition from the academics and administrators alike, particularly so far as the existing universities are concerned. Such a resistance would be quite natural and may be grounded in such human factors as inertia, narrow self or sectional interests, misplaced fears, doubts and suspicions, disinformation etc. These would have to be suitably tackled so as to secure the willing whole-hearted and unreserved cooperation of all persons affected by the change scheme and involved in its implementation. An open, widely-participated but time-bound debate on the existing structural set up—which is generally considered, inspite of its inadequacies and imperfections, as the only available alternative—and the alternate model spelled out herein will be very useful in this regard. It would also serve as a feedback mechanism helpful in identification of the sources and bases of resistances and in deciding about managerial actions to be taken in this regard. Ordinarily, while main reliance is to be placed on non-coercive techniques for getting a change scheme accepted and smoothly implemented, simultaneous employment of some degree of pressure, to be used sparingly and with considerable discretion, becomes inevitable for overcoming such forces of resistance as inertia, irrational attitudes and behaviours, well-entrenched status quo subscribers etc. It may be so here too. The process of implementation would also have to be carefully monitored for identifying and resolving unforeseen problems as also for ensuring that the much more dangerous, and at the same time, much less identifiable, covert resistance—directed at sabotaging or delaying the implementation or at discrediting the entire scheme as non-operational—does not occur or is suitably take care of. Hopefully, if adequate care and precaution are taken, the Indian university system with the suggested alternate configuration of its basic activities would be able to subserve the basic objectives underlying its existence in a more efficient and effective manner. □

References

1. The term 'effectiveness' refers to the extent to which an organization is able to achieve its goals. It is different from efficiency which is concerned with the cost aspect of organizational functioning.
2. The B.H.U. Statutes, for example, make provision for various Departments under a Head, who is, under the Ordinances, required to "manage his Department". The latter, while making the Head generally "responsible for the organization of teaching and research in his Department", further specify his duty assignments to include, among others, "to conduct all affairs—academic, administrative and financial—relating to the Department". B.H.U. Calendar, Part I, Volume I, 1983 edition, pp. 41, 42, 75 and 76.
3. Faculties have been specified as one of the 'authorities' under the B.H.U Act, the Statutes making their Deans "responsible for organization and conduct of teaching and research work in Departments comprised in the Faculty". The authority of the Dean over the Departments is further reinforced by the provision in the Ordinances that "The Head of the Department shall manage his Department subject to the general authority and direction of Dean of the Faculty . . ". Ibid, pp. 9,30 and 75.
4. The BHU Act specifies that the Vice-Chancellor shall be "the principal executive and academic officer of the University" and that the Academic Council" shall be the academic body of the University and subject to . . shall have charge of the organization of study and research in the University and the Colleges, the courses of study and the examination of students and shall have the right to advise the Executive Council on all academic matters". This charge is further detailed in the Statutes which include the all-encompassing provision, "to perform, in relation to academic matters, all such duties and to do all such acts as may be necessary for the proper carrying out of the provisions of the Act, these Statutes and the Ordinances". Ibid, pp. 7, 8, 10, 35-38.
5. The BHU Statutes provide for three Institutes two of them having a single and one, two Faculties-whose Directors are, under the Ordinances, responsible for 'the academic, administrative and financial affairs of the Institute' and who have been given authority over the Heads of Departments in no way different from that of the Deans.
   Ibid, pp. 24, 42-44, 69 and 75.
6. While the upper limit of this span may vary depending upon a large number of variables, its existence is a hard reality that cannot be ignored or denied by structure-designers.
7. To illustrate, the B.H.U. has a Department of Bio-Chemistry in the Faculty of Science and also in that of Medicine, a Department of Computer Science in the Faculty of Science and that of Computer Engineering in the Faculty of Technology, a host of separate language departments in the Faculty of Arts, and so on. This is not special to B.H.U., but is a common phenomenon in Indian universities.

AROUND THE WORLD BOOK FAIR

G.B.K. Hooja*

A number of seminars and workshops were organised on the occasion of the 8th New Delhi World Book Fair, 1988. There was an International Seminar on Publishing in the Electronic Age with special reference to Developing Countries. Then there was a National Workshop on the State of Art and Approach to Production, Publication and Marketing of Literature for Continuing Education of Neo-literates and School Dropouts organised by the National Book Trust (NBT) in collaboration with the Directorate of Adult Education. This was followed by a Seminar on the Need and Availability of Textbooks for Higher Education Sector in India, organised jointly under the auspices of NBT, UGC, AICTE, ICAR and ICMR. There were several other seminars and workshops organised on this occasion, such as on Desk-Top Publishing, Co-Publishing in collaboration with USSR, Developing Curricular Strategy for Talented Children etc.

I would particularly mention the holding of the World Urdu Conference attended among others by Ali Sardar Jafri, Ali Ahmed Saroor, Mohinder Singh Bedi, Malik Ram, and including scholars from USA, Canada, USSR, Kuwait and would The *Mela* could be regarded a success for this reason alone, even though critics may have many a fault to find within other aspects, which may certainly be taken note of for due consideration in the future.

In the true spirit of a *Mela*, it afforded an opportunity to old friends to meet, share experiences and exchange thoughts on various problems in the backdrop of literature and the world of books and challenges facilities presented by advancing technology. It provided an opportunity for new friendships to be made and new plans and strategies to be evolved in the common pursuit of book production and distribution at a time when India has launched a New Education Policy to wipe out the shame of 2 3rd of its population being illiterate and millions of literates being unemployed unemployable and, therefore, frustrated and alienated. It would indeed have been a pity, if the *mela* had been postponed, as was being proposed at one moment. It is conceivable that any break in the continuity of the series would have had serious reflections on the credibility of the Indian Book Management. Having overcome the initial hesitation, the NBT proceeded ahead to set up the show with the collaboration of the Federation of Indian Publishers who had the active support of the Federation of Publishers and Booksellers Associations in India, Akhil Bhartiya Hindi Prakashak Sangh, Authors Guild of India and Delhi State Booksellers and Publishers Association. What turned out to be was indeed a global and international *mela*. It attracted entries from all non-corners of the globe, the two power blocks and the non-aligned world in a fair measure. The SAARC nations were duly represented. The Indian national languages were all there in their full glory and effervescence. Book-lovers from all the continents rubbed shoulders in the various pavilions of this grand exhibition; and no doubt, struck bargains and established contacts for future transactions. In order to make it easier for the visitors to see the kinds of books they were interested in, books and the location of publishers were arranged as far as possible according to broad subject-wise categories. Halls 8, 9 and 10 were allotted to Humanities, Social Sciences Hall of Nations accommodated Hindi language publishers, Foreign Missions and also State and Central Government participants. The Mezzanine of Hall of Nations was reserved for National Exhibit, Grantha Akademies, Associations and Co-operatives, and display of books for neo-literates and school drop-outs and text-books for higher education. Hall of Industries had Universities and Indian language publishers except Hindi, while the Exhibition Complex housed Science & Technology, Indology, Career books, publishers of School textbooks and Children's books. Altogether it was an impressive and pleasantly confusing show; since it was simply impossible for the organisers to physically split the publishers to meet the desideratum of exhibiting books subject-wise, this was the best they could do, and leave the interested buyers to their perambulations.

Shri K.R Narayanan, Minister of State for Science and Technology inaugurated the International Seminar on Publishing in the Electronic Age. The Key-note Address was presented by Dr. N. Sheshagiri who gave an overview of the magical transformation which was on the horizon as a result of the communication revolution following technological advances in the realm of printing, publication and computerization. Amongst those who presented papers were W.B. Wiley,

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P L. Malhotra, Shahid Ali Khan, V.N. Mishra, R. Ingles, B. Cahill, Ravi Dayal, Frederick Mate, D.N. Malhotra and Mrs. Satnam Mohmood. The participants seemed to agree that books and book publishing, as currently understood, will continue to have an important place in the intellectual life of all countries, developed or developing, in the foreseeable future. Book publishing in what is described as the Electronic Age will consist of a combination of paper-based publishing and publishing-based on storage of information by electronic devices and techniques. It was felt that the new technology would constitute an opportunity rather than a threat to book publishing An endeavour, therefore, must be made to harness the new technologies to the production of books in a cost-effective manner and to utilize them in the management of the publishing process, particularly for the promotion and efficient distribution of the books produced. It was appreciated that reprographic and electronic data storage and retrieval devices had broadened the range of materials and services available to the clientele of the libraries. But this is **not in substitution** of books; in fact, it is an **extension** of the dissemination and retrieval sevice of information and knowledge stored in books, which continue to be major element of the library system. It was recognized, however, that the rapid growth of new technologie, would throw up certain problems in the developing countries, both concerning the type of appropriate technology to be adopted and a'so the speed and stage at which it should be introduced. Emphasis must, therefore, be laid on adequate training programmes for personnel to operate and maintain sophisticated machines and equipment, imported or developed within the country, in efficient running order, so as to avoid loss on investment and reap the benefits of cost reduction and efficient production.

The question of copyright legislation to protect creators of intellectual property also came up for consideration. It was felt that the development of new techniques of production at comparatively low cost had increased the urgency of strict enforcement of the law concerning copyright, which *inter-alia* protects the interests of authors and publishers, and ensuring that the legislative provisions in this regard are kept in constant review and are adapted to the needs of emerging situations arising from technological developments. It was also considered of paramount importance that authors' dues were promptly collected and paid to them through centralized collection agencies, which might be set up, if necessary.

Dr. J.N. Vashisht who ably conducted the proceedings could be safely entrusted with the follow-up action.

The Workshop on Production, Publication and Marketing of reading material for continuing education of neo-literates and school dropouts also attracted wide participation. In his inaugural address Shri Anand Sarup, Chairman, NBT, set the tone of deliberations when he questioned the attitude of our decision-makers who cavil about the cost and wastages under the programmes of Adult Education while they had no qualms of conscience when higher education was offered for a nominal fee in our most prestigious institutions in Science, Humanities, Engineering, Medicine and Agriculture to those who chose to emigrate to developed countries without giving any evidence of commitment to the people who had paid for their education. He, therefore, held that any strategy based on the presumption that we had a lot of selfless experts, self-financing voluntary bodies and self-denying publishers would be building castles in the air. People not only wanted returns on their time and knowledge commensurate with their contribution, but also the opportunity of functioning in a environment of trust, consideration and commitment to a well-defined purpose He laid emphasis on the importance of universalization of elementary education, control of population growth, development of motivation amongst illiterates for continuous participation in programmes of adult education based on functional literacy and aimed at improving their economic performance and quality of life, and involvement of all the media and all educated citizens in mounting a massive programme for eradication of illiteracy. It was necessary to produce useful and pedagogically suitable, graded reading material for neo-literates and school leavers to nurture and augment their hard-acquired skills, he added. L. Mishra delivered the key-note address, while Anil Sinha made a survey of available neo-literate materials in various languages. They referred to the Jana Shikshan Nilayams (JSNs) proposed to be established as peoples' centres for post-literacy and continuing education under the New Education Policy. It was pointed out that one lakh JSNs will be established all over the country by 1995. The activities envisaged to be undertaken by the JSNs are :

(a) to run a library;
(b) to provide reading room facilities;
(c) to provide a window for development information;
(d) to conduct discussions and organise action groups;

(e) to run short duration need based courses and vocational training;

(f) to conduct sports, recreational activities and cultural programmes

Suitable financial provision has also been made for purchase of books, maps, charts, pictures, newspapers and periodicals by the JSNs

A look at the functions expected of the JSNs would show that these are exactly the functions which a well run, committed school should undertake in the existing social milieu, and has not failed to do so where adequate resources are available What is needed is not a new organisation, but availability of the neceseary inputs by way of men and materials It will be recalled that under the Community Development Programme, launched with much fanfare in 1952 these very functions were proposed to be discharged by a tribe of Social Education Organisers, but they were obscured by Agricultural Extension Officers owing to the compulsions of economic necessity, then prevailing which demanded greater emphasis on augmentation of agricultural and food resources Now that the importance of human resource development is being recognised the Social Education Organiser might be resurrected, with the local school being the nodal point, and the plan need not be staggered to 1995 as envisaged under the JSN scheme In wiping out the shame of illiteracy, time is the essence of the matter

The main deficiency is not lack of the ideas or schemes but lack of competent and committed men behind the machines The illiterate Indian peasantry, which was condemned under the colonial rule as tradition bound and incapable of adopting modern practices has scaled new heights in agricultural production under the leadership of India's agricultural scientists and the extension agencies of Agricultural Universities, under the land to lab programme Surely, the backward and illiterate farmer and his wife shall spring a similar surprise, when the battalions of Indian schools, colleges and universities enter the field of action, following the example of the Agricultural Universities

Barring a few notable exceptions, most of these institutions are biding their time and are hesitating to accept the national challenge There is no reason why the traditional universities should hesitate to accept extension work also as their primary responsibility, alongwith research and classroom instruction. If a University does not function as a Light House for the district in which it is situated, it ceases to justify its existence, its international flights notwithstanding In this background the desirability of utilizing the 3rd Year of the B A /B Sc course and making the award of Degree dependent on satisfactory Adult Education work should be seriously considered under the Curriculum Development Scheme Amongst those who participated in this Workshop were Anil Bordia, B D Sharma, Satyen Maitra, Mahasveta Devi, Chitra Naik, Yash Pal Jain In her wide ranging paper, Chitra Naik referred to the Kerala experience where production of simple booklets on Science for Everyday Life accompanied by a people's library movement has galvanised the countryside into action for education and modernization She suggested that during vacations, students and teachers from colleges even schools could go from village to village in their selected village clusters and organise grantha melas and open reading sessions She was of the opinion that contribution of students and teachers in this manner might prove to be more valuable than their half hearted attempts at conducting literacy programmes If commitment exists, ways can be found, she said Yash Pal said that the Sasta Sahitya Mandal had published 184 titles under the Home Library Scheme. There was no lack of creativity but patronage was needed, which should come both from the Government and mass base

The prime aim of the Seminar on Textbooks was to review the textbooks already available in the field of higher education and to indicate ways and means for encouraging Indian authors to write more books in English and modern Indian languages Participants included amongst others Dr Shanti Swarup, Dr Maharaj Singh, Dr S K Dhingra, Dr Har Swarup Singh and Prof D P Patnayak. Papers were also presented by Dr G Kuppuswamy, Dr B N Thakur, Prof T Subbarao, Dr S Arthanari, Prof A Mukhopadhyay Prof K Shiva Shankar Prof I Sethi and others Prof Rais Ahmed presided Prof Yash Pal, Chairman, UGC delivered the valedictory address

There was a general consensus about the need for well written and attractively produced textbooks by Indian authors both in English and regional languages, carrying familiar illustrations and local nuances both for easy grasp and development of original thinking It was felt that western-oriented textbooks tended to militate against comprehension and creativity The participants emphasised the need for providing financial as well as professional incentives to selected writers, besides other facilities such as travel, library and secretarial assistance Joint authorship

(Continued on page 12)

Time Management for Students

L.C. Thanu*

"The pendant world's dominion may be won,
In fitting time and place by action done"
—Kural 184

Essence of Time Management

Time is scarce and life is fleeting. A student has 5 years at his disposal; 3 years in the undergraduate course and 2 years in the postgraduate course. During this short span, he has to make the optimal use of the facilities available to achieve success in life because time and tide wait for nobody. Therefore, Napolean exhorts : "Go, gallop, and don't forget that the world was made in six days. You can ask me for anything you like, except time." Rudyard Kipling avers: "If you can fill the unforgiving minute with sixty seconds' worth of distance run, then you will be a man." And "whoever has not two-thirds of his time to himself is a slave" says Nietzche.

Out of 8760 hours in a year, a diligent student spends 900 hours inside the classroom to receive instruction, 30 hours for examinations and 90 hours for NCC/NSS and other co-curricular activities. He sleeps for 2555 hours (7 hours per day), spends 1095 hours for his personal fun frolic and recreation and 730 hours for food. He has at his disposal 3360 hours per year for his all round development.

Time management means utilisation of time at one's disposal in the best possible way to achieve the maximum advantage towards one's harmonious development—physical, social, emotional and intellectual.

"I have no time." "I wish there were 48 hours every day." "Time is my enemy."—thus complains a busy man several times a day. This attitude betrays a colossal lack of time sense. In the words of Henry Ford, the busy man has time for everything. He does so many things in spite of his very busy schedule, The secret, therefore, lies in the scientific management of time. When a person says that he has no time, it simply means that he is not able to manage his time properly. The fact is that if "we take care of the minutes, the hours will take care of themselves."

* *Principal, Hindu College, Nagercoil-629002.*

The first step to manage one's time efficiently is to realise its three secrets :

(a) values of time,
(b) time budgeting, and
(c) concentration.

Values of Time

Time has been rightly described as undirectional. Like an arrow which has left the bow, it does not come back. Once lost, it is lost forever. For time management, it is essential to develop this consciousness of the value of time as a resource.

Time Budgeting

More than money, time is to be budgeted judiciously First draw up an annual plan with regard to all important academic and personal items Every quarter, draw up a fairly detailed plan for the following month. Never close a week without planning the following week's work. Prepare daily time budgets. Everyday, in the morning plan in detail the day's activities. Of course, this budgeting should land itself to adjustments and amendments to suit exigencies.

Concentration

Concentration or complete absorption in work is a must. Great men like Napoleon and Gandhiji had that quality in abundance. Time management implies time audit. Devote five minutes every night to review the day's work and see how the day's programme has been implemented and how it could be improved for the morrow.

Time Management and Students

At a time when every eye is set on the implementation of the New Education Policy with the fond hope of bringing into focus the multi-dimensional potentialities of our students, it would only be appropriate if the students are initiated to the concept of

'Time Management.' Occasions are many when we hear of students complaining that their syllabi are vast and can't fit into the time schedule. We find many intelligent and industrious students burning their midnight oil and in the end emerging not so creditably. Whither lies the hitch ? In this land there has never been a dearth of scholars of eminence. But it is to be painfully admitted that the tide is on the ebb in recent times. The obvious answer to such an impoverishment would be that our students lamentably lack proper orientation, guidance and direction to match their counterparts elsewhere. Hence the need to lay special emphasis on 'time management' as an integral component of Student Services.

In foreign countries a lot of attention is paid to the overall development of the personality of the students. We sincerely hope that the New Education Policy when implemented will do the magic in our country. The value-based education envisaged should be effectively exploited; advanced courses on time management, communication techniques and the like would indeed go a long way in the furtherance of our academics.

The following anecdote underscores the importance of time management.

One morning Andrew Carnegis interviewed two boys for a position. He placed a package in front of each and told them to start unwrapping. One boy carefully untied the string and placed it in a drawer. The other reached for a pair of scissors, snipped the twine and tossed it into the waste basket Carnegie then asked the two boys to wait outside.

"Shall I hire the boy who saved the string ?" asked his Secretary. "No I want the other boy," said the Steel Magnate. "The days of saving string are over. We are time-savers now."

Time Management Attitude (TMA)

Many praise skyhigh the value of time but only a few realise its value. It is vital to inculcate in the minds of the students the Time Management Attitude which will stand them in good stead in blossoming into worldly wisemen with a rich time sense. They are to be motivated to 'feel' the intrinsic worth of time so that they may put it to right use. In the late 1700's Benjamin Franklin wrote. "If you want to enjoy the greatest luxuries in life, of having enough time to rest, think things through, get things done and know you have done them to the best of your ability, there is only one way. Take time to think and plan activities in the order of their importance." True, only proper planning, setting goals, analysing the situations and working the plans, keeping the deadline in mind will help the students 'invest' time for better returns. In the words of William R. Wilkinson "time is something to be invested—not spent." And like most important factors in business this investment can be made more efficient in small ways, day by day because time is an hour-by-hour day-by-day investment.

To manage time effectively and thereby save time judiciously students are to be trained in the art of skilful listening, efficient reading, memory efficiency and effective communication.

The following are the tips :

Get an Early Start

An early starter (like Gandhiji and Sastriji) saves a lot of time The old saying, 'the early bird catches the worm' has a great deal of merit. The students should establish a specified time limit and need not wait till the deadline. Really, to defeat the deadline should be the motto.

Handle Toughest Tasks at "Prime Time"

"To choose time is to save time"—Bacon.

Each person functions at his peak at a particular time and it is the most cherished 'prime time'. Students are to identify their own 'prime time' and handle toughest tasks at this time Avoid visitors, and other distractions then.

The Pencil and Paper Habit

At some time or the other each of us has found ourselves thinking "If only I could remember..." The simple solution to this problem is to always carry pencil and paper with you. As the mind perceives a unique idea or you bear something noteworthy, write it down. Then file it some where that is easily accessible.

Use Priority Folders

It is suggested to use priority folders wherein items like 'Got to do, Need to do, Like to do' can be included and sorted out for execution.

Edward Young has aptly commented that "we take no note of time but from its loss." Time flies and

never returns. Students seriously involved in time management should guard against the potential time-wasters.

Lack of self-discipline is a major time-waster and students should indulge in self-evaluation to rectify the errors and make themselves more self-disciplined to avoid waste of time.

Lack of proper planning in setting objectives and priorities might steal away much of our precious time Not setting deadlines, postponing the unpleasant or the difficult, no follow up, not utilising the available infrastructure and facilities, unrealistic time estimates, inability to say 'no', drifting into trivia and the like, are the common time-wasters.

Poor health is a time-waster. One must be fit to work. Therefore, biological needs like sleep, food and recreation should be well-regulated. One must take good care of one's body through regular and required exercise. 'A sound mind in a sound body' is a well known adage. Good health is therefore an asset.

Certain bad habits like laziness, lack of interest, carelessness and day-dreaming are also time-wasters. But the most notorious timewaster to be kept at bay is Procrastination, which is the thief of time. Delays have dangerous implications. We whittle away our life by putting things off. Learning to thwart the nemesis called procrastination, is an art everyone should master.

Imaginative counselling to students on the various facets of skill development through thoughtful time management, will enable them to see through the alluring time-killing temptations. This capacity will see them through life. Vauvenargues has rightly said, "you are not born for fame if you don't know the value of time."

Around the World Book Fair

(*Continued from page 9*)

should also be encouraged so as to draw experts in various areas into the net. Work in this direction should be given due weightage for career advancement. While private and public publishing units should be encouraged to undertake publication of textbooks, universities should also strengthen their printing presses a la Oxford, Cambridge Translation of recognised standard works should also attract attention

It was felt that the task had lagged behind for want of will and effort on the part of the universities. There was no reason why 170 universities, including Institutes of higher learning should not divide the task of working in various branches amongst themselves and proceed more or less according to a specified time schedule. Prof. Rais Ahmed brought out the desirability of imposing responsibility on all universities to produce textbooks in courses of their specialization according to a time bound programme. Each university should take up one or more subjects and appoint a competent coordinator, who may seek assistance from scholars from other universities also, for writing various chapters, so that the students get the best of the national talent to enrich their minds. More than one universities could take up the same subject to present different aspects and to develop cross fertilization of thought. Prof Yash Pal pointed out that in foreign universities, students' notes often formed the raw material for textbook development. Why not in India ?

But the star question is, will the teachers come forward to bear this responsibility ? If the best of the products of the universities are lured away by the civil services, can the residuary alumni, who remain to adorn the educational system, be expected to pick up the gauntlet ? The need of the hour is to attract first class brains to the educational system by devising ways and means to stop the drift to other avenues as well as to foreign lands. Greener pastures must be found here and now in the Indian Education Service if the promise of Independence has to be fulfilled, and the courses of illiteracy, ignorance and poverty have to be wiped out from the fair face of Bharat.

Technology, Society and Education

Dr. S. Ramachandran, Secretary, Department of Biotechnology, Government of India, delivered the Convocation Address at the Fourth Convocation of the Bharathidasan University. In a hard hitting indictment of our education system, Dr. Ramachandran observed, "We have now a situation where the student is one of the most insecure persons in the world, not knowing what fate awaits him when he passes out of the university. So with over-anxious parents hovering in the background and a Western world based value system imposed by the society and with an examination system which tests only information and not rationality or wisdom, the present education system cannot make a student ready for life's problems". Excerpts

Convocation

Globally, we moved from an agrarian economy to an industrial economy by the turn of the century Since then the industrial economy itself has undergone rapid changes. There has been the shift from coal to petroleum first, and now with the scarcity of petroleum itself, we are looking at atomic energy. The search for other viable renewable energy sources is on There has been simultaneously a shift from manual to semi-automated system of industrial management, robotics has moved in and automation has become more and more micro-processor based. Control mechanisms today are getting miniaturised : it is more and more becoming an age of miniature technology. The paper based information system has given way to the micro-chip and computer based system and we are now moving towards an artificial intelligence system.

The industrial society has become more of an information based society. With developments in the field of communication, the world has shrunk considerably in size Even in a developing country like India, one can dial half the world from a number of places.

The society is also moving towards greater and greater awareness of the hazards of environmental pollution and of the imperative necessity of protection against such pollution.

Superimposing all these on developments in the fields of agriculture, transport, health, education, etc , and on rural, urban and on industrial communities, the whole life style has changed in all aspects. The maximum change has been in the value system. Socio-economic and other pressures have brought great transformation in the pace of development of a child; learning at every level has become information based and value based education has almost disappeared Indeed, as T S. Eliot has said aptly in the context of a wider canvas, "...Where is the wisdom we have lost in knowledge ? Where is the knowledge we have lost in information ?.."

In India, the problem has become further compounded with a system of education largely based on the pre-war British model. At all the stages in school education—KG, primary, secondary—and also in graduate courses, the present system does not prepare a person to meet the challenges of life.

There is fierce competition today among students from school level of a nature we could not even have visualised during our student days. The system of studies and examination and evaluation of results has also undergone tremendous changes. We have now a situation where the student is one of the most insecure persons in the world, not knowing what fate awaits him when he passes out of the university. So with over-anxious parents hovering in the background and a Western world based value system imposed by the society and with an examination system which tests only information and not rationality or wisdom, the present education system cannot make a student ready for life's problems. With the user friendly systems becoming more available, understanding has become less important and with the advent of robotics more of this will be taken away from the student.

We need serious debates and discussions for evolving an education system which will make for understanding, knowledge and wisdom. The process of change has to start right now, as the results of a change today can be known only after a decade or more. We have to remember that boys and girls who will be leaders in science and technology and society in 2000 A.D are already in schools. Our present system of education has produced only one Nobel Laureate

in the sciences (excluding Khorana and Chandrashekhar) and our only Nobel Laureate in literature was not a product of our education system. We have made very few inventions of international importance. One should not be averse to a continual improvement on our education system. The inter-disciplinary nature of education has to be incorporated in our education system from the earliest stage. So also, on-hand training, rather than heavy dependence on lectures. The aptitude of a person has also to be judged at the earliest stage : there is no such attempt in our present system of education.

Older people tell younger people that they don't know what they need, but it is for the individuals and younger persons to evaluate alternatives and decide. The earlier we give him an opportunity to do so, the better for everybody. Wisdom is not the exclusive domain of the aged. In one's philosophy of life, one can search for new knowledge or one can attempt to alleviate the sufferings of other people. The development of modern science should lead to positive benefits to the society. It is for the students coming out of educational institutions to take a stand on their own destiny.

The country makes investment in itself when it invests in education. The pay-off is in terms of new information and knowledge, or ability to manage institutions and resources, or in asset creation. The output of every individual coming out of educational institutions has its effect on the country; as far as capability is concerned, it is individuals who matter.

Let us briefly examine the question of the philosophy of life. Of course, there are many aspects and parameters to it. However, for the present occasion in which the graduating students heve completed their formal education and would be stepping out into the real world waiting outside, the question of philosophy of life can be broadly seen in material, spiritual and scientific contexts. The combination of the scientific and material philosophies will lead to the pattern of the technological aspects concerning our society. A combination of spiritual and material philosophies, on the other hand, leads to the sociological and community aspects of the society. In order to maintain a sensible balance between the mind and the body, for venturing into new challenges and frontiers in a wholesome manner, it is essential to constantly keep before us the true values of technological and societal development and needs, both at the individual and national levels. There is a need for a constant dialogue between these two spheres and for building bridges of understanding between them. This is essential if the individual wishes to have both the inner and outer sense of fulfilment. A lack of proper understanding, on the other hand, even leads to a conflict between the destiny of the individual against that of a society or a State. Unfortunately, in the modern system of education and life, the individual or even the society hardly even finds time to introspectively reflect on these aspects against a background of both personal and societal value systems. It is not uncommon for most of us to tear through everyday of our life a cascading mountain stream which knows not what awaits at the next turn. The changing values, increasing mental and moral stresses and the unrelenting pace of life of most of the westernised societies is perhaps what awaits our own larger and smaller cities and industrialised communities in the near future. Is this inevitable ? Has an educated intellectual no other way ? We should take short introspective brakes and ponder over the philosophy of life, the destiny of man and the objectives of social interactions; it is for us to find the solution to this.

Technological and Scientific Achievements—Indian Destiny

The widening gap between India as a developing country and the West is resulting more and more in our dependence on imported packaged high technology systems such as computer, electronic gadgets, software and programmes, robotics, pre-processed technological information on patents and other privatised intellectual properties, continued import of partly processed products, quick and unnecessary changes in equipment and instrumentation leading to quick obsolescence and therefore import dependence, etc. All these keep us West dependent and make us more illiterate with reference to newer developments in high technology. This situation increases the state of dependence and results in non-achievement of self reliance If the destiny of this country is to blindly follow the developments of the West, then we are destined to remain as second class citizens and slaves of Western technological developments. It is in the interest of the industrialised nations to keep poor and developing countries from achieving true self reliance.

You are stepping out today as graduates in the field of Science, Arts and Commerce into a world that is full of opportunities and for achieving a place for yourselves in the history of this great country. This cannot be achieved unless we learn how to utilise the knowledge that you have gained in these institutions of higher learning in an

innovative and uniquely 'Indian' manner India is a large and diverse country. We are blessed in a large measure with abundant natural resources including soil, water and sunshine Unlike many Western countries, there is hardly life slowing winter We are also surrounded by warm and productive oceans on all three sides The melting snows and the regular monsoons assure us enough life sustaining water There is enough and more land to feed all of us and still to spare, there is enough mineral riches to meet our needs and to spare and there is human intelligence to meet our requirements and to help others In order to acquire a worthy place under the Sun, the only way out is to make an all out effort to achieve world leadership in certain areas of natural advantage of our country and become in these areas globally competitive The Japanese and South Koreans have already shown that this can be achieved in relatively short periods Without trying to cover all such areas let me try to briefly list some of the areas of natural strength to this country in which we can achieve global leadership

(a) Achieving higher agricultural and animal productivity and globally competing in these areas

(b) Careful exploitation of our abundant mineral and other resources,

(c) Individual based skills in developing computer softwares and other programmes,

(d) Areas such as textiles silk, other fabrics, leather, minor engineering goods and individual oriented scientific and technical jobs on contract basis;

(e) In the entire areas of arts handicraft and jewellery ,

(f) Creative production in the field of fine arts, dance, drama and music

I would like to strongly urge the new graduates to match their own skills and aptitudes against these opportunities and challenges and where required, undergo further training to improve their skills and competence Upon graduation today, you have not only acquired a great deal of knowledge and skill, but hopefully you have also acquired incisive capability of introspection and have learned that life is one long and enjoyable journey of learning in which one pursues with vigour and joy, the ever expanding horizon of knowledge

This year the 12th January has been declared as the National Youth Day On this very day, 125 years ago, was born the very symbol of youthful challenge and self determination for achievement, Swami Vivekananda As I finish my talk, I can do no better, than to quote from Swami Vivekananda himself and I quote ' if India wants to rise once more, it is absolutely necessary that she brings out her treasures and throws them broadcast amongst the nations of the earth and in turn be ready to receive what others have to give her The education which does not help the common masses of people to equip themselves for the struggle of life, which does not bring out strength of character, a spirit of philanthrophy, and the courage of a lion—is it worth the name ' Real education is that which enables one to stand on his own legs Education is not the amount of information that is put into your brain and runs riot there, and undigested all your life We must have life building, man-making character making assimilation of ideas ' □

TATA INSTITUTE OF SOCIAL SCIENCES

(Institution Deemed to be a University)

Post Box No. 8313, Deonar, Bombay 400 088

Admission Announcement for 1988-89

POST GRADUATE PROGRAMME (FULL TIME)

1. **Master's Degree in Social Work** with specialisations in (1) Criminology and Correctional Administration (2) Family and Child Welfare (3) Medical and Psychiatric Social Work (4) Urban and Rural Community Development.

   Eligibility : A Bachelor's (3 years, or, 2 years and 1 year bridge course under 10+2+3 stream), or, a Master's degree in any faculty with a minimum of 45% of the marks or equivalent

2. **Master's Degree in Personnel Management and Industrial Relations :** A Bachelor's (3 years, or, 2 years and 1 year bridge course under 10+2+3 stream), or, Master's degree in(i) Arts Commerce with a minimum of *50% of the marks or equivalent, or, (ii) in Sciences with a minimum of *55% of the marks. Candidates who complete their Bachelor's degree examination (under the 10+2+3 stream) in full, including practicals, main subject and subsidiary, by June 5, 1988, are also eligible to apply subject to having obtained the same percentage of marks in the Ist and IInd year (together) University/College examinations *at first attempt otherwise 5% more.

NO CORRESPONDENCE COURSES ARE OFFERED. Brochure and application form available from March 1, on sending Bank Demand Draft for Rs. 20,- superscribed on the cover "Request for Application Forms for Admission" addressed to the Assistant Registrar (Academic).

Last Dates : Requests for forms by post : from March 1 to May 20, in person : from March 1 to May 31, **For completed applications** : June 1.

SPECIAL PROVISIONS

FOR SCHEDULED CASTES TRIBES CANDIDATES Reservation of seats for SC (15%) and ST (7½%). Application form supplied free on sending attested copy of Caste/Tribe Certificate. Travelling allowance reimbursed, free meals and hostel provided during tests only for those SC ST not employed and appearing for the test for the first time.

FOR FOREIGN NATIONALS 5% of the seats are reserved subject to their suitability.

Hostels : Seats available for Men and Women Students. A few scholarships and loans available for Indian nationals only.

The Institute reopens on Monday, June 20, 1988.

February 22, 1988

S.R. Pansare
DEPUTY REGISTRAR

Computer Based Bibliographical Information

The Institution of Information Technology (INFOTEK), Madras, organised recently a seminar on "Computer Based Bibliographical Information Processing using CDS ISIS Micro Software"

Mr. R Vengan Secretary, INFOTEK in his opening remarks said that the objective of the seminar was to keep the information professionals aware of some of the recent developments in information technology thereby create an interest among them and act as a catalyst in the development of their professional capabilities and excellence in performance The aim was, he added, to bring in and disseminate know how and if possible show how, of information technology, to fellow professionals

Dr P A Mohan Rajan, Librarian, University of Madras, who presided, in his address reviewed the explosion of information technology including computers, on line databases satellite communication technology and optical disk technology

Dr F J Devadason Vice President, INFOTEK and Asst Director (Information) Central Leather Research Institute (CLRI) in his presentation on 'CDS ISIS Micro Version : A Technical Overview explained clearly with a number of transparencies, the way to set up a bibliographic database using Micro ISIS He also pointed out the technique of building the inverted file, the search strategies and the various display print out formats He explained as a case study a bibliographical database with abstracts which can take care of books, articles conference proceedings, patents, standards trade catalogues, theses and serials.

Mr. R. Vengan, Secretary, INFOTEK and Documentation Officer, CLRI, spoke on 'Periodical Holdings Database using Micro CDS ISIS" He explained the necessity of having an upto date periodical holdings in every research library and highlighted how this can be achieved using Micro CDS ISIS He also indicated the techniques by which Union Catalogue of periodical holdings of all the research libraries in Madras City can be compiled very easily using Micro ISIS He mentioned the keyboarding of the data and correcting the errors, as one of the difficulties of creating the bibliographical database

About 70 delegates participated in the Seminar

Educational Media Centre

The Punjabi University is reported to have decided to esta blish an educational media centre as a central facility with the status of an independent department The centre s objectives are to use audio-visual technology for the improvement of teaching methods, impart training to students of the relevant courses and add new dimensions to research programmes A proposal to this effect has already been submitted to the UGC

A UGC team recently visited the university campus to assess the requirements of equipment and manpower for the centre

There are 38 teaching departments on the campus with about 300 teachers, who provide a large base of research personnel to produce software There are about 3,000 students to utilise this software. Besides, the Correspondence Courses Directorate, which has about 5,600 students, should prove receptive to the adoption of audio-visual techniques

Teachers of the colleges affiliated to the university will also become resource personnel for producing software for UGC higher education programmes

It has been pointed out that audio visual technology need not be restricted to the pronunciation and diction parts of language teaching but should also be extensively used for advanced level teaching of literature This university specialises in Commonwealth courses and proposes to produce software in this area too

According to the proposal, the students of journalism and mass communication, theatre and television should be trained in their respective disciplines with a view to utilising audio visual technology

Additional Funds for Colleges

The University Grants Commission (UGC) is reported to have decided to offer colleges extra-Plan funding to develop post-graduate courses

According to Mr M L Mehta, Additional Secretary, UGC, this fund will be available over and above any commitment already made to colleges under the Seventh Plan For undergraduate courses alone, Rs 2 lakh would be made available, and for postgraduate courses Rs 5 lakh

The colleges could procure video recorders, monitors, cassettes, receivers, word processors and language laboratories using this

assistance. For library books, an extra Rs. 25,000 would be available.

Mr. Mehta also said that to provide hostels for women and rural students, the assistance was raised from 50 per cent to 75 per cent by UGC recently.

20th Century Commonwealth Literature

A two-day National Seminar on "20th Century Commonwealth Literature: Innovation and Experimentation." was recently organised by the Department of English of Panjabi University, Patiala. Inaugurating the seminar, Dr. Bhagat Singh, Vice-Chancellor observed, "In its thematic, cultural and philosophical concerns, the commonwealth literature seems nearer home than the omnipresent and the inescapable English Literature." It has now acquired its own status and identity vis-a-vis English, European and Russian Literatures and could also provide us with a platform for the unification of diverse set ups in various commonwealth countries, he said.

Dr. G. S. Rahi, Head of the English Department, said that the commonwealth literary credentials are far more convincing and also guarantee interaction with other peoples and cultures in the political, anthropological, ethnic and geographical sense. Dr. Manjit Inder Singh, Convener of the Seminar, said that the scope for comparative critical approach in this vast area of contemporary literature is a belated realisation. We should, however, feel concerned with the newly emerging techniques, structures and forms in varied literatures of the commonwealth.

Computerising Adi Granth

Punjabi University has undertaken a project to store Guru Granth Sahib for IBM compatible personal computers. This will be of great benefit to researchers. The project involves the development of a Gurmukhi word processing package that is portable on IBM compatible microcomputers and uses the standard Gurmukhi typewriter keyboard. The presently available packages either work on micro-computers which are not industry standards or adopt the inscript keyboard design, which is different from the standard typewriter keyboard.

The university has allocated Rs. 50,000 for purchasing the required software. The project is being worked out by the university's Computer Centre in association with the Department of Guru Granth Sahib Studies. The work is likely to be completed in about a year.

Inter-University Cultural Exchange

Under the Inter-University Cultural Exchange Programme, a team of twenty postgraduate students of Kashmir University led by Mr. G. H. Gurku, Cultural Officer, visited various prominent universities of the country. The objective of the programme was to have an interaction among the youth and understand different diversities of Indian culture.

Amongst others the students visited universities of Bombay, Poona & Delhi.

News from Agril. Varsities

HAU Takes Over Nilokheri Institute

Haryana Agricultural University has taken over the Extension Education Institute (E.E.I.), Nilokheri. According to Dr. Har Swarup Singh, Vice-Chancellor, this decision will enable the University to have the widest and most systematic extension education programme in the country.

Nilokheri is the first among the three premier institutions established by the Government of India in 1959 under the Community Development Programme and has been organising higher level training in extension education, communication, extension-teaching methods, etc., to the trainers and instructors of Gram Sevak Training Centres and also to the teachers of the agricultural and veterinary sciences colleges to improve their teaching skills. The Institute also conducts workshops in some specialised fields like agricultural credit management, monitoring and evaluation, farm machinery and agricultural implements. The Institute caters to the training needs of such functionaries of all the north-west states, viz. J&K, Panjab, Himachal Pradesh and Uttar Pradesh.

A special project of about

Rs. 90 lacs has already been approved by the Govt. of India to strengthen the EEI, Nilokheri. There is a plan to have a good hostel for the trainees, a seminar hall and modern teaching aids at the Institute. The institute will also be strengthened by having senior level faculty members to improve the quality of training programmes

The Directorate of Extension Education of HAU, which is already transferring technology in the field of agriculture, veterinary animal sciences, home science and other allied services, also plans to start training for farmers and farm women at the Nilokheri Institute

Low Cost Green House

Scientists at the Indian Agricultural Research Institute (IARI), New Delhi have developed the know-how to construct low cost "Green House" which they believe could help in boost production of ornamental crops According to Dr G S Venkataraman, Joint Director (Research), IARI, the green house has been designed in such a way that the tunnel shaped pipe frame structure is with ultraviolet stabilized polyethylene It could be constructed at the cost of about Rs 100 per square metre wheres the traditionally used green houses are very expensive.

Inaugurating a training programme on the construction and management of low cost green houses and low tunnels, Dr. Venkataraman said this technology opened up a new approach for growing vegetables, flowers, fruits and other crops especially in those situations when it was not possible to grow them in the field.

Dr. Venkataraman said the major beneficiaries of the Green House technology are nursery growers, floriculturists, ornamental plant growers, vegetable growers around big cities and growers of horticultural crops in adverse agro-climatic conditions.

Training programme would impart know-how ranging from surface covered cultivation, layout and fabrication of green houses, environmental conditions in the green house, crop cultivation practices on floriculture, fruits and vegetables and resource management.

Over 100 agriculture scientists participated in the week-long programme

PAU Develops New Varieties

The State Variety Approval Committee, which met recently at the Punjab Agricultural University, has released two varieties of vegetables and three varieties of gladiolus for general cultivation in Punjab.

'Neelam', the new variety of brinjal has been developed from the inter varietal cross; it takes about 65 days from transplanting to the first picking; plants—medium in height, erect and thornless; fruits—medium sized, oval round and shining purple; average yield is 350 quintal/hectare.

'Punjab Komal' is an early maturing variety of bottlegourd, bears oblong, medium sized, light green shining fruits. Fruits remain tender even after attaining marketable stage On an average it yields about 500 quintal per hectare.

The three varieties of gladiolus are Melody, Snow Princess and Sylvia for general cultivation. Melody requires about 99 to 100 days for flowering with a spike length 87 cms bearing 15 florets per spike of peach colour with red throat. Snow Princess requires about 80 to 90 days for flowering with a spike length of 65 cm bearing 11 to 14 florets per spike of white colour with pale throat. Sylvia requires about 120 days for flowering with a spike length of about 75 cms bearing 13 to 15 florets per spike of claret rose colour.

News from Abroad

Simulation Flows of Molecules

Mr Jon Wagg, a first-year postgraduate physiology student at Melbourne's Monash University, has found a solution to a problem which has plagued chemistry and biochemistry researchers for years. He has come up with a general mathematical technique which will for the first time allow researchers to simulate the flows of molecules through a series of linked reactions. His research has shed light on how enzymes and molecules behave, and their relationship with each other. This will allow chemists and biochemists to find faster solutions to various problems.

Mr. Wagg's supervisor, the director of Monash University's centre for biomedical simulation, Dr. Brian Chapman, said that for the first time "we can simulate the

full complex behaviour of an enzyme system; we have a satisfactory answer to the way molecules flow through the reaction system". "This is a powerful technique which applies to the workings of all chemical or biochemical reactions in the steady state," he said.

Dr. Chapman said that Mr. Wagg had postulated an assumption which simplified the process. He had guessed that charged particles were "picked up and dropped" by transporting enzymes in a certain order. Contrary to previous belief, enzymes could transport a substance like sodium in and out of cells.

Mr. Wagg proved this theory mathematically; and in March 1987 he gave a paper on his work to a conference at the United States National Biomedical Simulation Resource at Duke University in North Carolina. Since then, he has worked with engineers to create computer software which can be attached to standard simulation software packages now available for use at Duke University.

Until now, there had been no accurate theoretical basis for interpreting how molecules flowed in one direction through a series of biochemical reactions such as, for instance, through the widespread enzyme transport system whereby sodium is pumped out of cells.

Sports News

North Zone Wins Vizzy Trophy

The North Zone has won the Vizzy Trophy tournament conducted by the Bombay University at Bombay from Feb. 21-28, 1988. In the finals, the North Zone defeated the West Zone. The scores were :

North Zone : Ist inning=410
2nd Inning 117 for three

West Zone : Ist Inning=244
2nd Inning=280.

We Congratulate.....

Dr. Kalyan Dasgupta who has been appointed Vice-Chancellor of the University of Kalyani, Kalyani.

AIU Library & Documentation Services

One of the important functions of the Association of Indian Universities is to act as a clearing house of information on higher education in the country. Towards this end the AIU Library is engaged in collection building and developing instruments for the dissemination of research information. Over the years a valuable collection of books and documents on different aspects of higher education has been acquired.

The Library has also developed Bibliography of Doctoral Dissertations as an effective tool in the dissemination of research information. Retrospective bibliographies covering the period 1857-1970 and 1970-75 were the first to appear. Effective 1975, however, the bibliography is issued annually in two volumes. One volume deals with Natural and Applied Sciences while the other records doctoral degrees awarded in Social Sciences and the Humanities. In addition to the normal bibliographical details like the name of the Research Scholar, the title of the thesis, years of registration for and award of the degree, and the name of the University accepting the thesis for award of a doctoral degree, the bibliography also gives name and complete address of the supervising teacher and an availability note that seeks to inform whether a copy of the dissertation is available for consultation and use in the University Library/Department or Registrar's Office.

The columns 'Theses of the Month' and 'Research in Progress' are intended to cut out the time lag between the receipt of information and its inclusion in bibliography. Such Universities as are not sending us regular information in respect of Doctoral Theses accepted and research scholars enrolled are welcome to make use of these columns.

The Library is open from 9.00 a.m. to 5.30 p.m. Monday through Friday.

RESEARCH IN PROGRESS

A List of Research Scholars Registered for Doctoral Degrees of Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Bhagwat, Purnima. *Some problems on fourier analysis.* HS Gour. Prof. S.K. Shrivastava.

Statistics

1. Chopra, Sangeeta. *Effect of optimal utilization of land resources on income inequality and poverty in Rural Punjab : Inference based on certain non-parametric test statistics.* Panjab. Prof. O.P. Bagai and Dr. A.D. Jutka.

Physics

1. Bakhshish Chand. *High resolution spectroscopic studies in certain nuclei.* Panjab. Dr. Nirmal Singh and Prof. R.N. Trehan.

2. Surinder Singh. *Measurement of X-ray fluorescence cross-sections and application using energy dispersive XRF-technique.* Panjab. Prof. P.N. Trehan and Dr. Nirmal Singh.

Chemistry

1. Agarwal, Anita. *Coordination chemistry.* HS Gour. Prof. M.C. Sexena.

2. Agarwal, Prahalad Kumar. *Phytochemical investigations of some indigenous medicinal plants.* HS Gour. Dr. R.N. Yadav.

3 Chaturvedi, Pramod Kumar. *Studies on cardiotonic constituents of some Indian Liliaceae plants.* HS Gour. Prof. V K. Saxena.

4. Dubey, Vibha. *Studies on natural products.* HS Gour. Dr. A.K. Banerjee.

5. Dhangar, Seema. *Ion exchange and sorption properties of some silicate minerals and clays.* HS Gour. Dr. O.P. Srivastava.

6. Jain, Jai Kumar. *Structural studies on cobalt (II) nickel (II) and copper (II) complexes with nitrogen containing ligands.* HS Gour. Dr. Gopal Narayan.

7. Jain, Ravinder Kumar. *Chemical investigation of some Indian medicinal plants.* HS Gour. Dr. (Smt) Savitri Devi Srivastava.

8. Jain, Sanat Kumar. *Phytochemical investigation of cardenolides from some indigenous apocynaceae plants.* HS Gour. Dr. V.K. Saxena

9. Kashyap, Rekha. *Chemistry of natural products.* Delhi. Dr. D.K. Bhardwaj.

10. Malhotra, Rajesh. *Some chemistry of organoxy/organo-organoxy silicon compounds containing Si-N bond(s) and the related derivatives.* Panjab. Prof. S.P. Narula.

11. Mandeep Singh. *Electrochemical viscosity and kinetic studies of some electrolytes in mixed solvents.* Panjab. Dr. Dip Singh Gill.

12. Monday, Onkar Santoshrao. *Studies on oils, glycosides and carbohydrates of some plants and synthesised organic compounds.* HS Gour. Dr. J.T. Rao.

13. Nadkarni, Leena. *Kinetics and mechanism of copper. (II) catalysed oxidations by hexacyanoferrate (III).* Banasthali. Dr. S.S. Gupta.

14. Nagar, Bitthal Das B. *Phytochemical investigations of some indigenous medicinal plants.* HS Gour. Prof. V.K. Saxena.

15. Nema, Durga. *Phytochemical investigation of some Indian medicinal plants.* HS Gour. Dr. S.K Srivastava.

16. Pawar, Ramesh Chander. *Structural studies on copper (II), nickel (II) and cobalt (II) complexes with nitrogen containing ligands.* HS Gour. Dr. Gopal Narayan.

17. Rao, K. Venkateshwara. *Studies on analysis and biological activities of some plant products and synthesised heterocyclic compounds.* HS Gour. Dr. J.T. Rao.

18. Rohit, Virender Kumar. *Studies on the flavonoidal constituents of some indigenous Hibiscus plants.* HS Gour. Dr. R N. Yadav.

19. Sethi, Sangeeta. *Solid state thermal decomposition kinetic studies on metal salicylates.* HS Gour. Dr. G L. Agarwal.

20. Sharma, Mukesh. *Phytochemical studies on some Indian aromatic and medicinal plants.* HS Gour. Dr. R N. Yadav.

21. Sharma Sanjiv. *Synthetic experiments in Lepidoptera pheromones.* Panjab Dr. O.P. Vig and Dr. C.L. Kad.

22. Sharma, Rajeev Kumar. *Studies on transition metal derivatives of halosubstituted trialkyl phosphates and related compounds.* Panjab. Dr. Suniti Kumar.

23. Soni, Mamta. *Mechanistic studies on Ce (IV) oxidation of some organic compounds in acid media.* HS Gour. Dr. G.L. Agarwal.

24. Srivastava, Alka. *Catalytic activity of vanadate ions in the epoxidation of some unsaturated organic compounds by hydrogen peroxide.* HS Gour. Dr. G.L. Agarwal.

Earth Sciences

1. Dhar, Sunil. *Geology and geochemistry of the Jalor granites and the associated acid volcanics around Jalor, District Jalor, Western Rajasthan, India.* Panjab. Dr. Naresh Kochhar.

2. Dosajh, Sanjiv. *Geology and geochemistry of the carbonate rocks and associated volcanics in Shali belt of Bilaspur and Nandi Areas, Himachal Pradesh, India.* Panjab. Prof. A.K. Prasad and Dr. S.P. Kapila.

3. Harikrishnan, T. *Time series study of the beaches.* Kerala. Dr. K.P. Thrivikramji.

4. Singh, Swarn Deep. *Contribution to the palaeontology, biostratigraphy and palaeoecology of the Bombay and correlative intertrappean of Western India.* Panjab. Prof. Ashok Sahni and Prof V.J. Gupta.

5. Vamanan Nair, E. *Sedimentological and geochemical studies on the marine sediments of the Arabian Sea.* Kerala. Dr. K.P. Thrivikramji.

BIOLOGICAL SCIENCES

Anthropology

1. Bhatt, Archina. *Physical development and nutrition of young children in rural area of Kashmir : A study in human ecology.* Panjab. Dr. S. Kaul.

2. Jalota, Ritual. *Ayurveda as an alternate medical system in tradition and modernity.* Panjab. Dr. B.G. Banerjee.

3 Lamba, Rajni. *An anthropological analysis of cure culture complex of gonds of Mandle.* Panjab. Dr (Mrs) Shalina Mehta.

4. Mukhopadhyay, Nupur. *Tibetan culture and traditional system of medicine in immigrant Tibetans in India.* Panjab. Dr. B.G. Banerjee.

5. Sanjeev. *Fat patterning in North-Western Indian population ranging in age from 12-48 years* Panjab. Dr. Inderjeet Dewan and Dr. R. Parkash.

Botany

1. Arora, Sanjeev Kumar. *A symbiotic germination, micropropagation and morphogenesis of some commercially viable and endangered orchids of India* Panjab. Dr S.P Vij.

2. Chaudhry, Bharti. *Histochemistry of ultrastructure of wood plants of India.* Delhi. Dr M R Vijayaraghavan

3. Gaba, Rakesh Kumar. *Physiological and biochemical studies of allelopathic influence of eucalyptus on plant growth and development.* Panjab. Dr. R K Kohli.

4. Khanna, Ravi Raj. *Ecological studies of some mosses of Kumaon Himalayas and Punjab Himalayas.* Panjab. Prof S.N. Kumar and Dr. N.L Sharma.

5. Rajinder Kumar. *Studies on autotoxicity in Lantana Camara L.* Panjab. Dr. R.K. Kohli and Dr. R.K. Dhir.

Medical Sciences

1. Hosseni, S.M.H. *Immunochemical studies in monoclonal and polyclonal gammopathies.* Shivaji Dr. A.M. Saoji.

Animal Husbandry

1. Arvinder Kaur. *Epizootiology and biology of common angelocephaline cestodes in sheep along with cytopathology and haematology of the definitive host.* Panjab. Dr. Harbans Singh Bali and Dr. C.L. Duggal.

THESES OF THE MONTH

A List of Doctoral Theses Accepted by Indian Universities

PHYSICAL SCIENCES

Mathematics

1. Jas, Manoranjan. *A study in topological structures and in theory of fixed points of mappings over them.* Burdwan. Prof. Abhoy Pada Barsnab.

2. Lau, Neelam. *On special topics in mathematical programming.* Delhi.

3. Majumdar, Manju. *Some problems on eigenfunction expansions : Some investigations on m-coefficients.* Calcutta.

4. Mehra, Monica. *The motion of a geocentric synchronous satellite under the gravitational forces of the sun, the moon, the earth and solar radiation pressure.* Delhi.

5. Pandurangan, J. *Numerical study of some jet impingement problems.* Anna.

6. Ramakrishna Rao, Anantha Patnaikam. *Study of morita equivalence of rings.* Madras.

7. Rangarajan, K. *Lindenmayer systems and L. nets.* Madras.

8. Sahadevan, R. *Painleve analysis and integrability of certain coupled nonlinear oscillators.* Madras.

9. Shanthi, A. *Study of two particle excitations in superfluid hellum-4.* Madras.

10. Singh, Akoijam Manglemjao. *A mathematical study of population dynamics with particular reference to Manipur.* Manipur.

11. Singh, K. Manihar. *Spherically symmetric distributions of viscous and perfect fluids.* Manipur. Dr. K.S. Bhamra.

12. Singh, S. Nabachandra. *Generalized inverses of matrices.* Manipur. Dr. A.K. Chatterjee.

13. Tamizh Mani, K.M. *Geometrical group theoretical and singularity structure aspects of certain nonlinear partial differential equations.* Madras.

14. Viswanath, M.K. *Harmonic analysis on Sp (2, R).* Madras.

Statistics

1. Kantam, R.R.L. *Some contributions to gamma and related models.* Nagarjuna. Prof. V.L. Narasimham.

2. Srinivasan, M.R. *Quadratic least squres estimators for variance components (design and genetic) based on mating designs.* Madras.

Physics

1. Alamelu, V. *Studies on global effects of geomagnetic storms.* Madras.

2. Chattopadhyay, Taraprasad. *Synchronization of microwave oscillators through electrical and optical terminals.* Burdwan. Prof. Baidyanath Biswas.

3. Chaudhuri, Pranabkumar. *Study of structural phase transition in $ZnTiF_6H_2O$. $MnTiF_6$. $6H_2O$ systems and their denatured analogues.* Calcutta.

4. Gangopadhyay, Ramswarup. *Non-relativistic potential problems and the limit of large dimensionality.* Calcutta.

5. Krishnamoorthy, V. *Ultrasonic studies in electrolyte solutions with particular reference to internal pressure and free volume.* Madurai.

6. Murali, R. *Studies on biological molecules.* Madras.

7. Parashar, Pratima. *Mechanical properties of some polymers.* Durgawati. Dr. S.C. Datt.

8. Purniah, Boddapati. *Design of automated internal friction apparatus and study of dislocation point defect : Interaction in FCC metals.* Madras.

9. Rangadhama Rao, Cheruvu. *Studies on Bremsstrahlung due to inhomogeneous beta radiation.* Andhra.

10. Ravi Kumar, K. *Structural studies on compounds of medicinal interest and some metal complexes.* Madras.

11. Sivakumar M. *Aspects of relativistic wave equations, algebraic classificaton and dimensional reduction of gauge invariant theories.* Madras.

12. Thailambal, V.G. *Structural studies on molecules of medicinal and biological interest.* Madras.

13. Veena, K.R. *Structural studies on molecules of biological interest.* Madras.

14. Venkata Subbaiah, Kamatam. *Effect of fluorescence, Bremsstrahlung and annihilation radiation on the spectra and energy deposition of gamma rays in bulk media.* Madras.

15. Vijayalakshmi, J. *Studies in structural crystallography.* Madras.

Chemistry

1. Ananthanarayanan, C. *Studies on the chemistry of azides.* Madras.

2. Anjappan, R. *Synthesis and characterisation of certain new copolyimides.* Madras.

3. Bangarusudarsan Alwar, S. *Catalysis in acyl transfer reactions.* Madras.

4. Dalvi, Kavita. *Physico-chemical study of some metal complexes with anti-materials.* Bhopal. Dr. S.S. Gupta.

5. Deolankar, Deepak Shankarrao. *Studies on some metal complexes of substituted aryl furyl and aryl, thienyl-beta-ketones.* Marathwada. Dr. Y.M. Deshpande.

6. Dileep Kumar Maripi. *Inorganic chromium species in sea water : A study in the Arabian Sea.* Andhra.

7. Gill, Madanmohan Singh. *Hydrodeheterogenation of model compounds found in coal utilizing metal complexes of the heteroatom species.* Panjab.

8. Kar, Sudip Kanti. *Phytochemistry of Indian hepaticae : Marchantia polymorpha L and Marchantia palmata Nees and synthetic studies on stilbenoids.* Delhi.

9. Kolanchi Babu, M. *Correlation analysis in chemistry : Polynuclear aromatic compounds.* Madurai.

10. Lakshmana, D. *Preparation and studies on some new polyesters of 2.5-dicarbomethoxy-3, 4-diphenyl cyclo-pentadienone with diols.* Madras.

11. Mani, N. *Studies on metal complexes : Solvents and hydrogenion effects on rates of iron (II) reduction of some cobaloxime and studies on (III) cobaloxime equilibria.* Madras.

12. Mitra-Mustaphi, Harigopal. *Kinetics and mechanisms of anation of hydroxopenta aquo chromium (III) ion by polydentate ligands.* Burdwan. Prof. Gourisankar De.

13. Paulrajan, S. *Studies in polymerization.* Madurai.

14. Prasad, K. *Stability, structure and bonding in ternary complexes containing imidazole derivatives.* Osmania.

15. Rajendran, V. *Synthesis, characterization and fibre studies of certain new azoaromatic polyamides.* Madras.

16. Rama Mohana Rao, Ambati. *New analytical methods for some analgesic and anti inflammatory agents in pharmaceutical preparations.* Andhra.

17. Ramachandran, P.N. *Kinetics and mechanism of oxidative cleavages by tetrabutylammonium dichromate, periodate and permanganate.* Madras.

18. Ramaraj, R. *Preparation and photo-electrochemical investigations of macromolecular ruthenium (II) complexes thionine and pheno-safranine dyes.* Madras.

19. Ramesh Babu, P. *Synthetic studies using organotin compounds.* Madras.

20. Ray, Ratna. *Studies on physico-chemical aspects of triglycerides.* Calcutta.

21. Saha, Hera Lal. *Thermal decomposition reactions of metal carboxylate complexes in solid state.* Manipur. Dr. Semiran Mitra.

22. Sampath, A. *Preparation and studies of some new copolyesters of 2 5 dicarbomethoxy-3, 4-diphenyl cyclopentadienone with diols.* Madras.

23. Sheila, D. *Studies on some reactions related to magnesium carbonate.* Madras.

24. Singh, L. Ramananda. *Synthesis of steroid enol lactones.* Manipur. Dr. I.S. Khaidem.

25. Subramani. *Nuclear quadrupolar interactions in systems containing 35C.* Madras.

26. Tyagi, Om Dutt. *Synthetic studies related to naturally occurring flavanones, isoflavanones and other flavonoids.* Delhi.

27. Vara Prasad Rao, K. *Synthesis, reactivity and spectral studies of 4H-Imidazol (2,1-C) (1,4) benzoxa (thia) zines,* Osmania.

28. Verma, Neena. *Synthetic studies in insect sex pheromones.* Panjab.

Earth Sciences

1. Babu, B. Linda Prabhakar. *Sedimentological and palynological studies of Pakhal Supergroup, Andhra Pradesh.* Osmania.

2 Bandyopadhyay, Saswati. *Dicynodont reptiles from the triassic yerrapalli formation and their importance in stratigraphy and palaeontology.* Calcutta.

3. Prasad, Yeluri Venkata Satya. *A survey of spontaneous combustibility of coals of the Raniganj Coalfied.* ISM. Prof. D. Chandra.

4. Rama Mohana Rao, Surapaneni. *A study of cyclone frequencies and sea-surface temperatures in the Bay of Bengal.* Andhra.

5. Singh, Amalendu. *Influence of geological parameters on strata control problems of coal measure rocks.* ISM. Prof. D. Chandra.

6. Subrahmanyam, Ayyalasomayajula Varaha. *Genesis of Panchpatmali Bauxite Deposit, Orissa, India.* Andhra.

7. Trivedi, Rajendra Kumar. *Acid magmatism and copper mineralisation in Malanjkhand, Madhya Pradesh.* ISM. Dr. M.S. Naik.

Engineering & Technology

1. Arun Kumar, T.A. *Production efficiency of oil wells* ISM. Prof. S. Srinivasan.

2. Bandopadhyay, Chiranjib. *An analysis for stability of parting between contiguous pillar workings.* ISM. Prof. A.K Ghosh, Dr. B. Singh and Dr. P.R. Sheorey.

3. Bhaduri, Bikash. *Some applications of system analysis in biotechnology.* Burdwan. Prof. Sushil Kumar Basu.

4. Bhagavanta Rao, Satyavolu. *Catalytic converter system for spark ignition engine exhaust emission control—Design, development and performance evaluation.* IIT Delhi. Prof. H.B. Mathur and Dr. M.K.G. Babu.

5. Das Gupta, Sajal. *Longwall system design for Raniganj Coal Field—Some considerations.* ISM. Prof. A.K. Ghosh.

6. Govindaraj, G. *Size effects in metallic thin films.* Madras.

7. Murti, K. Gopalakrishna. *Friction welding of some dissimilar material combinations.* Madras.

8. Ramana Rao, T.V. *Computer aided feeding system design for circular steel castings. Osmania.*

9- Sidhu, Darshan Singh. *A study on the corrosion potential of steel embedded in concretes made of different cements.* IIT Delhi. Dr. S. Krishnamoorthy.

10. Singh, Arun Kumar. *Static protection of coal face electrical drives : Some investigations.* ISM. Dr. D.K. Mitra

EDUCATION NEWS INDEX

A List of Select Articles and Editorials on Education from Newspapers received in the AIU Library during February, 1988.

EDUCATIONAL PSYCHOLOGY

Shruti. Education and musical style. *The Economic Times* 7 February, 1988.

EDUCATIONAL PHILOSOPHY

Misra, B L. Education is life. *The Pioneer* 22 February, 1988.

Sudarshan, C. New ingredients of education. *Deccan Chronicle* 2 February, 1988.

EDUCATIONAL SOCIOLOGY

Behl, R.K. Whither women's education ? *The Tribune* 28 February, 1988.

EDUCATIONAL POLICY & PLANNING

Faruqi, Shamsur Rahman. Minority education—I & II. *The Statesman* 10 & 11 February, 1988.

Joshi, Navin Chandra. New direction for higher education. *The Pioneer* 28 February, 1988.

Khullar, K.K. Education policy. *The Hindustan Times* 12 February, 1988.

Sahi, Krishna Re-dedicating education to people *The Indian Nation* 8 February, 1988.

EDUCATIONAL ADMINISTRATION

Amrik Singh. Political meddling in AMU. *The Tribue* 2 February, 1988.

Beteille, Andre. Autonomy of universities : Unjust charge of corruption. *The Times of India* 6 February, 1988.

Bose, Hiren Autonomous college is no solution. *Free Press Journal* 21 February, 1988.

D'Mello, Ashley. Full liberty for autonomous colleges. *The Times of India.* 4 February, 1988.

UNIVERSITY CONUNDRUMS, *(Editorial) Deccan Herald* 22 February, 1988

CURRICULUM

Anantharaman, P S Mathematics in India *The Economic Times* 8 February, 1988.

LANGUAGE & LANGUAGE POLICY

Amrik Singh. Indian education rootless. *Deccan Herald* 16 February, 1988.

Amrik Singh. The neglect of Sanskrit *The Tribune* 23 February, 1988.

Verma, S.K. Teaching English—I & II. *Deccan Chronicle* 16 & 17 February, 1988.

TEACHERS & TEACHING

Chilana, M.R. In-service education and training of teachers. *The Indian Nation* 21 February, 1988.

Indiresan, P.V. March into ignorance : Why teachers lost the battle. *The Statesman* 16 February, 1988.

Joshi, Navin Chandra. Neglect of good teacher. *Deccan Chronicle* 22 February, 1988.

Kuruvilla, Joseph. Teacher-student interaction. *The Hindu* 23 February, 1988.

Murali Krishnan. Centre for excellence in teaching. *Indian Express* 5 Fbruary, 1988.

Sena, Vinod. Why shoot the teacher ? *The Hindustan Times* 12 February, 1988.

Singh, Bikram. Are college teachers more interested in politics and coaching ? *Amrita Bazar Patrika* 16 February, 1988.

STUDENTS & STUDENT ACTIVITIES

Jain, Nemichandra. Theatre at the universities. *The Statesman* 8 February, 1988.

Nanjundappa, D.M. A future for the average student. *Deccan Herald* 1 February, 1988.

EDUCATIONAL EVALUATION

Mohandas, K. An excellent teacher evaluation system. *The Hindu* 9 February, 1988.

EDUCATIONAL RESEARCH

Khan, Asif. Universities, business and industry, *The Pioneer* 7 February, 1988.

Verma, D.P. Research : Looking within and without. *The Tribune* 21 February, 1988.

EDUCATIONAL TECHNOLOGY

Banerjee, Utpal K. Informatics technology. *The Economic Times* 21 February, 1988.

Milstein, Mark, H. Attending university by computer. *The Hindu* 21 February, 1988.

Raghunath, S. Copying machines for students. *The Tribune,* 10 February, 1988.

SCIENCE EDUCATION

Negi, A.S. Indian scientists and supper conductivity. *Deccan Chronicle* 1 February, 1988.

Saraf, Suraj. Scientific research in a mess. *The Statesman* 3 February, 1988.

VOCATIONAL EDUCATION

Chaudhary, S.C. The problems facing vocational instruction. *The Hindu* 16 February, 1988.

JOB-ORIENTED EDUCATION, *(Editorial) Deccan Chronicle.* 16 February, 1988.

Khullar, K.K. Vocational education : New thrust to old idea. *The Patriot.* 24 February, 1988.

Sharma, S.P. and Others. Hope for Medical College. *The Tribune* 4 February, 1988.

BOOKS & LIBRARIES

AZAD CONTROVERSY *(Editorial) Amrita Bazar Patrika* 7 February, 1988.

Datta, Debajyoti The book business. *Amrita Bazar Patrika* 4 February, 1988.

LIBRARIES IN distress. *(Editorial) Free Press Journal* 2 February 1988.

Mayer, Peter. Publishers must think global, but act local. (*Asoke Kumar Memorial Lecture*). *The Telegraph* 5 & 6 February, 1988.

Mehra, R.K. What ails Indian publishing ? *The Hindustan Times* 7 Feamary, 1988.

Qureshy, Ahtesham. Library of Tagore's exultation. *The Hindustan Times* 14 February, 1988.

Sehgal, C.L. The role of libraries in book industry. *Patriot* 12 February, 1988.

Srinivasa-Raghavan. Who reads, who writes, who does the arithmetic ? *The Indian Express* 14 February, 1988.

DISTANCE EDUCATION

Anjanappa, K. Role of study centres in open universities. *The Hindu* 23 February, 1988.

Misra, B.L. Distance learning and management education. *The Pioneer* 16 February, 1988.

SPECIAL EDUCATION

Charate, Krishna. Helping the disabled to lead normal lives. *The Hindu* 2 February, 1988.

Khullar, Sushma. Educating the handicapped. *The Indian Nation* 13 February, 1988.

COMPARATIVE EDUCATION & COUNTRY STUDIES

Sharma, Jan. Education : Nepal sets a model. *Free Press Journal* 25 February, 1988.

INSTITUTIONAL PROFILES

THRIVENI ACADEMY—an unique educational venture. *Deccan Herald* 7 February, 1988.

BIOGRAPHIES

Pathak, A.N. Professor C.V. Raman—Life history. *The Pioneer* 28 February, 1988.

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CLASSIFIED ADVERTISEMENTS

INSTITUTE OF MICROBIAL TECHNOLOGY

COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

Advertisement No. 2/88

The Institute of Microbial Technology, Chandigarh has been as one of the Distributed Information Centres (DICs) in identified Bioinformatics as a part of National Bioinformation Network. The principal objective of this centre is to have ready access to computer based information on resources and data-bases in specialized fields related to biotechnology for retrieval and dissemination. The facility is funded by the Department of Biotechnology and the posts advertised here are temporary but likely to continue. Pay and allowance as per Central Government rate.

Applications in the prescribed forms are invited for the following posts :

1. **Scientist E (One post)**

Scale of Pay—Rs. 3700-125-4700-150-5000

Group IV (3)

Essential Qualifications

A Ph.D. degree in physical or life sciences or information science with at least 12 years of research experience after obtaining M.Sc. degree. Evidence of ability to shoulder responsibilities such as planning and execution of the activities related to DIC.

Desirable

Familiarity and working experience with modern computers and computation techniques used in biological research, information science or related field. The position is at a senior level and the incumbent will be responsible to plan, execute and control the overall activities of the centre. He will have to supervise a team which is involved in database management and development of related software packages. Only those who have proof of such capacity are likely to be considered.

Age

Age not exceeding 40 years as on 1.5.88.

2. **Scientist C** (One Post)

Scale of Pay—Rs. 3000-100-3500-125-4500.

Group IV (2)

Essential Qualifications

A first class M.Sc. preferably with a Ph.D. degree in information computer science with at least 6 years research experience after obtaining M Sc. degree in areas of computer information sciences.

Desirable

Experience with computer networking and the development management of related software. Experience as a system analyst.

Age

Age not exceeding 40 years as on 1.5.88.

Job Requirements

(1) To collect, collate and retrieve the information required by the scientists and to analyse the date using existing software packages in the area of life sciences.

(2) To assist scientists in analysis of data by developing new software packages.

(3) To guide supervise system analyst and programming staff.

(4) To design, develop and implement information system in the areas of biological sciences.

3. **Scientist B** (One Post) (Reserved for SC but General category may also apply)

Scale of Pay : Rs. 2200-75-2800-EB-100-4000.

Gropu IV (1)

Essential Qualifications

A first class M.Sc./Ph.D. in computer/ Information Science.

Desirable

2-3 years experience after obtaining M.Sc. degree in computer related activities, experience in the development of software and storage and retrieval of scientific information.

Job Requirements

1. To maintain and update scientific databases and software.
2. To design develop and implement information system in the area of biological sciences and to execute related job assigned from time to time,
3. To assist scientists in developing software required for data analysis in the area of biological sciences.

Age

Age not exceeding 35 years (40 for SC ST candidates).

4. Sr. Technical Assistant (Two Posts)

(Reserved for SC—One Post)

Scale of Pay—Rs. 1640-60-2000-EB-75-2900.

Group III (2)

Essential Qualifications

B.Sc. in physics/electronics/computer sciences of diploma of 3 year duration in Engg. Tech. with 3 to 5 years experience in the operation of computers of work of equivalent nature.

Desirable

Knowledge/experience of computer programming and data entry. Persons with at least 5 years experience and a good academic record will be preferred.

Age

Age not exceeding 33 years (38 years for SC/ST candidate as on 1.5.88)

Job Requirements

To operate, maintain computer information system and to assist the staff of bioinformatics centre.

5. Jr. Technical Assistant (One Post)

Scale of Pay—Rs. 1400-40-1800-EB-50-2300.

Group III (1)

Essential Qualifications

B.Sc. or equivalent degree in physics/electronics computer science or diploma of 3 years duration in Engineering Technology.

Desirable

Experience of operation computer systems and handling data entry operations.

Job Requirements

To operate computer systems and perform input/output duties related to information and databases. To assist other scientists at the Bioinformatics Centre.

General Conditions

Persons working in Govt. Deptt./ undertaking Autonomous bodies should send their application through proper channel. **The number of vacancies mentioned may vary at the time of selection.** Application forms can be had free of cost from the Administrative Officer, Institute of Microbial Technology, House No. 244, Sector 35-A, Chandigarh. Upto 7th March, 1988. Number of advertisement, name of the post applied for and full address in block letters must be indicated at the top of the request which should be sent together with a self addressed and stamped for Rs. 1.40 envelope of 22 cm x 10 cm size for obtaining the application form. Complete application in the prescribed form together with non-refundable application fee of Rs. 8 (No fee in case of SC/ST candidate) in the form of crossed Indian Postal Order drawn in favour of the Director, Institute of Microbial Technology, Chandigarh alongwith attested copies of the testimonials/certificates should reach the Director, Institute of Microbial Technology, House No. 1389, Sector 33-C, Chandigarh, latest by 30.3.88.

Canvassing in any form and/or bringing in any influence, political or otherwise will be treated as a disqualification for the post.

Since it is not possible to call all the candidate for interview/test the application will be short listed for the purpose and the decision of a duly constituted Screening Committee of the Institute will be final.

"Interim enquiries will not be attended to"

OFFICE OF THE REGISTRAR
KAKATIYA UNIVERSITY
WARANGAL
ADVERTISEMENT No. 1/88
Dated : 25-2-1988

Applications are invited in the prescribed form for the following posts in the Kakatiya University service so as to reach the undersigned on or before 15-4-1988.

Department		Post	Area of Specialization
EDUCATION	(i)	Lecturer (1)	M.A. Psychology & M.Ed., with M.Phil Ph.D.
	(ii)	Lecturer (1)	M.A., M.Sc. Maths or Statistics, M.Ed. with Tests & Measurement & M. Phil, Ph.D.

Reservation of 15%, 7.5% and 25% of vacancies of Lecturers is made for candidates belonging to Scheduled Castes, Scheduled Tribes and listed Backward Classes respectively as per G.O. Ms. No 995, dated 1st.12.1982

Prescribed application forms can be obtained from the Publication Cell, Registrar's Office, Kakatiya University, Vidyaranyapuri, Warangal - 506 009, in person or by post sending a self-addressed envelope, affixing Rs. 2.00 postage stamps on payment of Rs. 20 - either by a challan payable at the State Bank of Hyderabad, Kakatiya University Branch or by sending a crossed Demand Draft in favour of the Registrar, Kakatiya University, Warangal. Postal Orders will not be accepted. The University reserves the right to fill or not to fill any or all of the posts.

Details of qualifications and experience prescribed in respect of the above posts will be furnished alongwith the application form.

Prof. Digamber Rao
REGISTRAR

S.N.D.T. WOMEN'S UNIVERSITY
1, NATHIBAI THACKERSEY ROAD
Bombay 400020

Advertisement No. 7

March 5, 1988

Applications are invited in the prescribed forms available at the University Office between 10-30 a.m. to 2-30 p.m. from Monday to Friday and 10-30 a.m. to 12.00 Noon on Saturday, on payment of Rs. 5 - (M.O Indian Postal Order in Cash) for

(1) C.U. Shah College of Pharmacy, Bombay-49, one Store Keeper (Under Reserved Category), having B.Sc. with 3 years experience as Store Keeper, in the pay scale of Rs. 365-15-500-20-660-Extn-20-760 + admissible allowances; and

(2) S.N.D.T. Women's University Hostel, Bombay-49, one female Assistant Hostel Superintendent (Non-Vacation Post), having Bachelor's Degree or its equivalent Degree, with Psychology, Sociology and or Social Work with 3 years work experience (preferably in Women's Hostel or any other institution) will be preferred. Age limit 21-50 years. Relaxable by 5 years for SC/ST candidates. Knowledge of English and Regional languages (Marathi/Gujarati Hindi is a must. Salary Scale: Rs. 395-15-500-20-700-Extn-20-800 + admissible allowances. Apply on or before **15 days** from the date of this advertisement. Please collect job specification from the office alongwith an application form. Applications of Scheduled Castes Tribes Nomadic tribes DNT, will be considered as per Government Directives. Incomplete applications and applications on a plain paper will not be considered.

REGISTRAR

MANIPUR UNIVERSITY

CANCHIPUR : IMPHAL

Advertisement No. 2/88 **Dated, the 29th February, 1988**

Applications are invited for the following posts :

Post		Department	No of Post	Specialization
Professor	1	Chemistry	1	Physical
	2.	Economics	1	Open
	3	Education	1	Open
	4	Philosophy	1	Open
	5	Commerce	1	Open
	6	Earth Sciences	1	Geology (Open)
	7.	Mathematics	1	Open
Assoc'ate : Professor	1.	Earth Sciences	1	Geology (Open)
	2	Commerce	2	(I) Accounting & Finance (II) Marketing Management (Preferably with Production Management)
	3	English	1	English Language Teaching (Method)
	4	History	1	Open
Assistant Professor	1	Chemistry	3	(I) Organic (II) Inorganic (III) Physical
	2	Physics	1	Solid State Theory Nuclear Physics Dynamical Systems
	3	English	1	American Literature Language
	4	Hindi	1	Open
	5	Mathematics	1	Open

Scales of Pay

Professor Rs 4500-150-5700-200-7300 .

Associate Professor Rs 3700 125-4700-150-5700/-

Assistant Professor Rs 2200-75-2800-100-4000/-.

Essential Qualifications

1 **Professor** An eminent scholar with published work of high quality actively engaged in research in the relevant field. About ten years experience of teaching and/or research Experience of guiding research at doctorate level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge in the clevant field.

2 **Associate Professor** : (a) Good academic record with a doctorate degree or equivalent published work in the relevant field. Evidence of being actively engaged in (i) research or (ii) innovation in teaching methods or (iii) production of teaching materials

(b) About 5 years experience of teaching and or research provided that at least three of these years were as Assistant Professor Lecturer or in an equivalent position.

This condition may be relaxed in the case of candidates with outstanding record of teaching research

3 **Assistant Professor** (a) Master's degree in the relevant subject with at least 55% marks or its equivalent grade and good academic record

(b) M. Phil and Ph D. are desirable qualifications The minimum qualifications prescribed in (a) above shall not, however, be relaxed even in respect of candidates who have research degrees like M. Phil Ph. D.

Candidates invited for interview will be given Ist Class (for Professor/Associate Professor) and 2nd Class (for Assistant Professor) railway fare as T.A. from the place of origin and back or the actual expenses on fare, whichever is less.

HOW TO APPLY

Applications, on plain paper (in, duplicate) with attested copies of certificates in support of qualifications and experience showing candidate's name, father's name, academic & professional attainment, teaching and research experience, field of specialization, publications (to be enclosed with reprints) seminars/conferences attended, details of visits to foreign countries and assessment reports from at least two persons well acquainted with the candidate's professional work should reach the REGISTRAR, MANIPUR UNIVERSITY, IMPHAL-795003 on or before 28th March, 1988

Applications received late or incomplete in any respect may not be entertained Persons already in service must apply through their employers so as to reach this office on or before the last date fixed No candidate will be considered for appointment unless he/she produces a "No Objection Certificate" from his/her employer at the time of interview.

Required persons who have not attained the age of 62 years may also apply for appointment on contract basis. It will be open to the University to consider the names of suitable candidates who may not have applied.

REGISTRAR

REGIONAL RESEARCH LABORATORY

JORHAT : ASSAM

(Council of Scientific & Industrial Research)

Advt No 1 88

Applications in the prescribed forms (available free of cost from the Administrative Officer, Regional Research Laboratory, Jorhat-6 (Assam) on sending a self addressed big envelope affixing 0 45 paise stamp with a written request stating advertisement number and name of the post) are invited from candidates for the following position for RRL-Jorhat.

1. Scientist 'B'—1 post (No. of post may vary)

Scale of Pay Rs.2200-75-2800-EB-100-4000/-.

E.Q. & J.R. : Ist Class M.Sc. in Organic Chemistry with R & D exp. in Synthetic heterocyclic chemistry. Preference will be given to the candidates with knowledge of drugs & Pharmaceuticals specially anti-allergy drugs etc.

2. Scientist 'B'—1 post

Scale of Pay : Rs. 2200-75-2800-EB-100-4000/-.

E.Q.: Ist Class Master Degree in Science. Expertise/experience in Technology transfer/utilization, and/or Information & Public Relation &/or Publication & publicity and/or Industrial Liaison.

J.R. : The selected person is to work on (i) Technology Utilization and Transfer Services and (ii) Industrial, Public & Press Liaison, Publication, Documentation & Publicity work.

GENERAL

1. Higher starting salary may be given to exceptionally qualified and experienced candidates on the recommendation of the Selection Committee.

2. *In addition to basic pay, dearness* allowance is admissible as per CSIR rules in force. Total emoluments at the minimum of the scale will be Rs. 2,566/-. Free medical treatment, leave travel concession, pensionary benefits etc. are also admissible as per rules. H.R.A. at Rs. 220/- P.M. is also admissible, if no *accommodation is provided.*

3. Persons who are already in Govt./ Semi Govt. Organisation should apply through proper channel. Candidates are required to specify and attach documentary evidence (attested copies) of E.Q. and exp. claimed.

4. The application in the prescribed form together with crossed postal order of Rs. 8/- payable to the Director, RRL-Jorhat-6 (Assam) should reach him by 5-4-88. SC/ST candidates need not pay any fee (IPO) along with their applications : Reservation of SC/ST candidates will be as per govt. of India rules.

Application received after this date will not be entertained. Candidates called for interview will be paid 2nd class railway fare by the shortest route for the to & fro journey.

5. "Since it is not possible to call all the eligible candidates for interview/ personal discussion, the applicants to be shortlisted for the purpose and the decision of the Council/Laboratory will be final in this regard.

6. Indian candidates applying from foreign country may send their applications upto a fortnight after closing date in standard application form supplied by our missions abroad and without application fee.

7. Canvassing in any form and or bringing in any influence, political or otherwise, will be treated as disqualification for the post/(s).

Interim enquiries will not be attended to.

SANJAY GANDHI POST-GRADUATE INSTITUTE OF MEDICAL SCIENCES

Rae Bareli Road, Post Box No. 375, LUCKNOW.

Requires

LAST DATE 30th MARCH, 1988

Sl. No.	Name of Post	No. of Post	Pay-Scale	Total emoluments at the Initial	Maximum Age
1	Librarian	1	Rs. 1000-1900	Rs. 2202–60 (Pre-revised)	45 Yrs.

Minimum Qualifications & Experience

1. First or Second Class M.A. /M.Sc./M. Com., plus a First or Second Class B. Lib. Science or a Diploma in Library Science. A degree in M. Lib. Science will be preferred.
2. At least 10 years experience as Librarian or in a responsible professional capacity in a University Library.
3. Research experience with publications will be another preferential qualification. Deserving Candidates may also be considered for appointment on contract basis for a specified period.

General Conditions

Allowances as admissible to the employees of U.P. Government shall be provided. Additional increments (upto 5) may be considered in deserving cases. Relaxation in age as per rules may be considered in otherwise qualified candidates. Candidates belonging to SC ST and other categories will be given preference as per rules.

Candidates may apply on plain paper giving details of qualifications and experience etc. alongwith marksheets and certificates of examinations passed Persons in employment should send their applications through proper channel The Director reserves the right to reject any or all applications without assigning any reason thereof. Incomplete applications are liable to be rejected. Selection Committee has the right to relax qualifications.

DIRECTOR

BANARAS HINDU UNIVERSITY

CORRIGENDUM TO ADVERTISEMENTS

The pay scales for the posts of Professor Reader Lecturer as advertised earlier have since been revised as follows :

Name of the Post	Pay Scales in which the posts were advertised	Pay Scales revised to
1. Professor	Rs. 1500-60-1800-100-2000-125/2-2500.	Rs. 4500-150-5700-200-7300.
2. Reader	Rs. 1200-50-1300-60-1900.	Rs. 3700-5700.
3. Lecturer	Rs. 700-40-1100-50-1600.	Rs. 2200-75-2800-100-4000.

Accordingly appointment to the posts of Professor/Reader/Lecturer as advertised previously will now be made in the aforesaid revised pay scales.

This supercedes the Notifications Dated 1st July, 1987 and 7th August, 198[illegible] issued in this regard.

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